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(24013)

FOREWORD

Reports on the food situation in these four countries were prepared in this Office in March 1943, in fulfillment of a particular assignment. In the expectation that some of the material contained in them might be of more general interest, they are now issued in an amended form. The data are adjusted for information available here up to 1 July 1943. The period covered ends with the crop year 1942-43.

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SECTION I

FOOD IN BELGIUM

1 July 1943

(24013)

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FOOD IN BELGIUM

SUMMARY

1. Current legal food rations and supplementary non-rationed foods available in Belgium provide about three-fifths the caloric requirements of most of the population.

2. Legal food rations are not always available in the cities. The farm population and those who can afford purchases on the black market benefit at the expense of the rest of the population.

3. Malnutrition and hunger are common in the Belgian cities. Reports indicate that the consequences of dietary deficiencies are particularly apparent among children, pregnant women and nursing mothers.

4. Current Belgian rations are in reasonable alignment with what the food supply position warrants. Belgian agriculture is not geared to provide more than one-half of normal caloric intake of the population.

FOOD IN BELGIUM

I. THE FOOD POSITION IN BELGIUM

A. Under the Rationing System

Most foodstuffs are now rationed in Belgium. Different quantities of food are legally made available to consumers, depending primarily upon their occupational status and, to a less extent, upon their age. The consumer categories and estimates of the numbers falling into each are given in Table I.[1/] Current legal rations have also been tabulated (Table II), as well as changes in the rations since June 1940 (Table III). Legal rations, particularly for meats and fats, have been changed many times since rationing was first introduced following the German invasion. (See Table V). In practically all cases, the change meant a reduction. Thus the fats ration for the normal consumer was originally almost five times its present size; the meat ration is now one-third the initial quantity. Invariably, these reductions followed a period during which the rationed amounts were not available. Generally, therefore, diets defined by the legal rations (and by the availability of supplementary non-rationed foods) provide an upper limit to average consumption in each consumer category.

B. Availability of Rations

The Belgian economy provided less than half the caloric intake of its population during pre-war years. Agriculture has been expanded in certain respects during the period of German occupation; nonetheless, the situation is still one in which extreme food conditions would prevail even if total supplies were distributed equally throughout the

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1. All numbered tables are included in Appendix.

population. Under such conditions, it is most difficult (if at all possible) to have equal distribution. Producers retain more than their share; food finds its way into illegal exchange channels where people of means are willing purchasers. Both these phenomena are common in Belgium. The extent to which they exist cannot be stated precisely. It is nonetheless true that estimated food supplies, at least since mid-1941, have been in excess of those required to meet rations and other essential uses; but ration reductions have still occurred.1/ This can only mean that food distribution according to the rations was not taking place. Certain parts of the population, notably the farmers and the financially able in the cities, were consuming more than their share. Large elements, especially those with low incomes, must therefore have found it impossible to obtain the quantities of food to which their rations entitled them.

There are many reports of the unavailability of rations in Belgium.2/ The situation with respect to potatoes provides in itself ample testimony that the legal rations are in excess of actual consumption by large parts of the population

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1. German requisitions, both for export to Germany and for the troops in Belgium, are a factor here. During the first year of occupation, these takings were significant, especially in meat, dairy products and vegetables. Subsequently, exports to Germany declined; they probably do not affect the situation appreciably today. Provisioning of the occupation troops is included in all our estimates of ration requirements. The per capita consumption of German soldiers is presumably as high in Belgium as in other areas. But the total quantity of foodstuffs now involved is not large.

2. Thus, a report, from a secret source, received late in October 1942, indicated that "normal rations provide caloric allotment of 1,200 per day, but the normal consumer actually gets 700-750 calories per day. Workers get perhaps 1,000 calories per day." This measure of ration unavailability may exaggerate the situation (it is certainly unapplicable today) but there is no doubt that rations are frequently unobtainable.

over considerable periods of time.1/ In early summer, 1941, and for much of the rest of that year, potato distributions were reported at 500 grams per week as against legal rations of 3,500 grams.2/ Again in summer, 1942, supplies to cover rations were unavailable; rations were reduced to 1,400 grams per week in July 1942; they were raised to 2,100 grams in August, and restored to 3,500 in September. At that time, consumers were permitted to buy advance potato rations for a period of approximately eight months. Those who failed to do so have been finding it difficult to obtain potatoes throughout the past winter. It is estimated, on the basis of current supplies, that about four-fifths of the current potato rations are available to consumers.3/

C. Nutrition and Health of the Population

On the assumption that legal rations are available, caloric intake by the consumer groups can be calculated. Caloric intake was also calculated in terms of actual consumption, the availability of rations being estimated in light of the present supply picture.

If it is assumed that rations are available, total caloric intake (including non-rationed or locally rationed foods) of the adult normal consumer is about 1,485 calories per day or 62 percent of the minimal nutritional requirement. Given the stated degree of unavailability of the potato ration, the normal consumer receives about 1,414 calories per day or 59 percent of the amount required. This group comprises

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1. The potato ration accounts for 32 percent of the caloric value of the normal consumer's current legal rations.

2. "In the large towns, during the winter and spring of 1941, the population received from 1½ to 2½ kilos per person per month, instead of the 15 kilos which was the official ration. They are at present distributed at the rate of 2 kilos per month per person, in towns." From a secret report, received 2 May 1942.

3. See below, page 9.

almost 50 percent of the total population; included in it are the majority of the women, manual workers in the civilian goods industries, most self-employed and others whose occupations could not be classified as "sedentary." The same is true for all the categories of special workers: calories are well below what their work demands and what such workers actually obtained in pre-war years. (See Table V, for example).

Children are treated as normal consumers for most rationed commodities, with the important exception that allocations of fresh milk are made to children under 14, and of skim milk to adolescents from 14 to 18. Special provision is also made for undernourished city children, in that facilities exist for their being evacuated to the country where, under proper supervision, special rations of bread, meat and margarine are made available to them. During the period of childbirth, women are also given quantities of whole milk, as well as small additional allocations of bread and meat. Despite these provisions, the caloric and nutrient content of the diets of children and young mothers is deficient. For children under six, caloric values provided by the rations exceed nutritional requirements. However, this is largely due to the fact that allotments of potatoes are the same for all urban people, regardless of age. Actual consumption, particularly by the younger children, is not the same; potatoes, as indeed, most of the rationed foods, go into the "family pot." The "extra" food for the children contributes to small increases in the inadequate dietaries of the adult population.

An attempt is made by the Belgians, through charitable organizations (like the Winter Help and the National Children's Movement) to provide some supplementary foods to the poorer groups in urban areas. Communal soup kitchens are thus

available to very low income groups, and meals are distributed to undernourished children. These groups are also responsible for conducting canteens and low-price restaurants in the large cities. Here, ration cards must be turned in for rationed foods. Thus the meals provided do not constitute supplementary foods; they are simply made available to those who might not be able to afford to pay market prices.

The nutritional value of the actual daily dietary of the various consumer groups in terms of proteins, fats, and carbohydrates is shown in Table VI. Combined with the significant deficiency of calories, the extreme lack of fats in the dietary must have serious effects upon the health of the population.

In sum, then, food made available to the Belgians through legal channels provides a most inadequate nutritional basis for urban consumers in all categories.1/ Comparable evaluations reveal that food allocations provide this urban population with a caloric and fats intake which is one of the lowest for urban populations in occupied Europe. There are many reports that health conditions have deteriorated, perhaps seriously. In the light of the food situation portrayed above, there is no reason to discount these heavily, if at all. The following are excerpts from some of these reports:

> "Unless people can get food from the black market, they are undernourished. Since the occupation, T.B. has increased."1/
>
> "There has been a great increase in incidence of diseases. Number of admissions to hospitals for T.B. has risen by 60 percent since outbreak of war. Undernourishment (is) evident everywhere. Adults have lost one-fifth of their weight and others proportionately more."2/

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1. Bern Telegram, 15 August 1942.
2. Secret report, received 31 October 1942.

"Health of Belgian children causing great alarm. Cases of T.B. in children observed, also serious increase in psoriasis."[1]

"Cases of extreme debility in the infantile population multiply, especially in the town; infirmities due to malnutrition, including mental deficiency, syncope, oedema, etc."[2]

"...it may be stated that the "official" food ration (in the case of a category of persons who for more than eighteen months have been living almost exclusively on this ration) has brought about...a deplorable health situation, which is marked by serious pathological troubles, sometimes even resulting in death..."[3]

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1. Bern Cable, 24 November 1942.

2. Censorship intercept, 9 April 1941.

3. Report from secret source, received on 5 May 1942. The statement quoted is from the conclusion of a detailed study (presumably made by a physician) in which the successive developments in the condition of the members of this category were described. Also included in the report were details of an inquiry conducted in four large maternity hospitals in Belgium. "Manifest malnutrition of pregnant women" was usual.

II. FOOD BALANCES, 1942-43

Some indication can be given of the relationship between probable requirements and probable supplies of important foodstuffs during the crop year ending 1 July 1943. They are of particular interest in the light of the earlier discussion on the availability of rations. All ration requirements have been computed on the basis of current legal rations and our estimates of the number of people in various consumer categories. (See Tables I and II).

The balances indicated below must be interpreted with care. In the first place, rations are fixed largely on the basis of other supplies which it is anticipated will be available. They bear little relationship to requirements from either a psychological or physiological point of view.

Secondly, even though requirements as determined by the established rations should not exceed anticipated supplies, it is still possible and quite likely that substantial numbers of the population will not be able to purchase their rations. Substantial quantities of foodstuffs actually produced are distributed through the black market rather than through legal channels, and the farm population doubtless consumes more than the legal rations allow. Unless the balance indicates a substantial surplus of supplies over "requirements," it is likely that many people will be unable at many times to purchase rations through official channels.

A. Breadgrains (wheat and rye):

1. Minimum Requirements (metric tons).

Rations	600,000[1]
Seed	45,000[2]
Waste and unmillable grain	65,000[3]
Total	710,000

2. Supplies (metric tons).

Production	875,000[4]

3. Balance of Requirements and Supplies. The "surplus" shown in the figures is apparent, not real. It assumes that farmers will retain only their legal rations for domestic consumption and that none of these grains will be fed to livestock. Both of these are unlikely; this is especially true with respect to feeding, since in pre-war years the larger part by far of the production of these grains was fed to animals.

Of the 472,000 tons which the government expected Belgian farmers to deliver, only 75 percent (354,000) had actually been delivered by 15 March. On the basis of current rations, about 425,000 tons is necessary to feed the non-rural population. If reported German shipments of 150,000 tons actually were made, it should be possible to meet rations without difficulty. Reports from Belgium indicate that this has actually been the case.

The changing composition of Belgian bread is also noteworthy, indicating the change in relative supplies of

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1. Requirements in terms of bread are estimated at 815,000 metric tons. The figure of 600,000 tons was obtained after correction for the quantity of flour entering into bread, the admixture of potato and beet root flour, and an extraction rate of flour from grain which ranged from 90 to 95 percent for the different kinds of grain.

2. At 2 bushels/acre for 790,000 acres.

3. Seed plus waste estimated at about 15 percent of production.

4. See Table VII.

the principal breadgrains. While in September 1941, flour consisted of 60 percent wheat and 30 percent rye, in September 1942, Belgian flour was composed of 45 percent wheat and 45 percent rye, and in April 1943, it was decreed that flour must henceforth contain 70 percent rye and only 20 percent wheat.

B. Potatoes

1. Minimum Requirements (metric tons).

Rations	1,625,000
Potato flour	75,000[1]
Seed and waste	500,000[2]
Total	2,200,000

2. Supplies (metric tons).

Production	2,500,000[3]

3. Balance of Requirements and Supplies. Here again, both consumption demand and feed demand by the farmers will result in larger farm retentions. Potatoes were important sources of hog feed in pre-war years: it can be estimated that an additional half million tons were retained for this purpose alone. Since foreign trade in potatoes is small (being confined almost entirely to seed potatoes),[4] supplies are pretty much what is produced. Shortages for urban consumers should, therefore, exist. Even more ominous is the planned reduction of 30,000 hectares in the 1943 acreage, which should involve a reduction of at least 500,000 tons in production.[5]

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1. Used for admixture in bread.

2. Estimated, conservatively, at 20 percent of total crop.

3. See Table VII.

4. 2,900 tons of seed potatoes reported shipped to Belgium from Holland and Germany in 1942. Volk en Staat, Antwerp, 10/16/42.

5. Announced in Le Soir, 1 April 1943.

C. Meats

1. Minimum Requirements (metric tons)

Rations . . . . . 140,000[1]

2. Supplies (metric tons)

Production . . . . . 164,000[2]

3. Balance of Requirements and Supplies. Rations for meat should have been filled during the crop year just ended, even after allowing for farm consumption above what is legal. However, farm slaughterings are most difficult to control, and demands for meat in the black markets are very great.[3] Furthermore, small quantities of meats may still be exported, though there are now no indications that this is the case. The attempt to divert feed to milch cows and so to maintain both number of milch cows and milk production must involve further reductions in number of meat animals. In any event, meat supplies will not permit ration increases; rather they may even mean that current rations will not be legally available during this year.

One encouraging note is that the December 1942 census revealed an increase of 200,000 in the pig population over the preceding January, as well as an increase of 20,000 in the number of keepers of pigs. This indicates that some improvement in the Belgian meat picture is in prospect, though

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1. Ration requirements amount to 112,000 tons at retail. This is held to be equivalent to 140,000 tons shipped from the slaughter house. Figures for meat rations are present rations placed on an annual basis.

2. See Table VIII. The figure is an estimate for 1942; 1943 output may be somewhat smaller. A small increase in pork production may be expected, but this may be more than offset by small declines in beef and veal output.

3. MEW estimates 45,000 tons of meat consumed via the black market in 1942. This is equivalent to about 52,000 tons shipped from the slaughter house.

the expansion in the number of pig raisers will probably involve an increase in the size of black market distribution.

D. Fats and Oils

1. Minimum Requirements (metric tons).

Rations 55,000

2. Supplies (metric tons).

Production . . . . . 57,000[1]

3. Balance of Requirements and Supplies. The close relationship between supplies and minimum requirements suggests that rations of fats and oils will be difficult to obtain during the current year. The position is particularly severe since rations would provide for consumption at a level only one-third that of the pre-war average.

E. Milk

1. Minimum Requirements (metric tons).

Rations . . . . . 390,000[1]

2. Supplies (metric tons).

Production . . . . . 495,000[2]

3. Balance of Requirements and Supplies. The above figures suggest a more favorable situation than is perhaps warranted. The production figure (as indicated in Table X) is really an amount available for human consumption, i.e., whole milk fed to livestock and used for butter production

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1. See Table IX. The figure is an estimate for 1942 and excludes exports. During 1943 a reduction can be expected from the 1942 levels, due principally to the probable decline in milk output. The figure for 1943 can be provisionally taken between 50,000 and 55,000 tons, assuming that Germany again demands an export of 6,000 tons.

2. As shown in Table II, this figure is based upon the expectation that only children under 14, pregnant women and nursing mothers, and the farm population consumes whole milk.

3. See Table X. This estimate is also for 1942. Total milk output may be smaller in 1943; but it is also possible that a smaller percentage of the total may be fed to livestock. Milk available for human consumption may therefore be maintained, or even increased.

has been deducted. This quantity fed can, if necessary, be restricted sharply, thus releasing whole milk for human consumption or for butter manufacture. On the other hand, recent reports already indicate that milk, as rationed, is not fully available to children over three years of age.

The food situation in Belgium will not improve during the current year. The gradual expansion of the agricultural base of the economy and the gradual alignment of livestock to feeding possibilities may improve the position of an occupied Belgium during the next two or three years. But this development cannot in that period convert the present food situation into one which could in any way be called adequate. It must be remembered that Belgium, in pre-war days, produced about half the caloric value of the food intake of its population. This normal dependence upon imports is the key to the situation portrayed above. It would not have been possible for Germany to replace these exports without impairing her own war effort. It is true that German requisitions and the consumption of German occupation troops aggravated the Belgium position. Acquisitions by the Germans appear more important than they were, quantitatively, precisely because the basic position was so bad. Even if no food had been taken by the Germans, extreme food conditions would prevail.1/ The same can be said of the administrative difficulties in food distribution, and, indeed, of the two factors (German requisitions and inequitable distribution) taken together. These factors aggravated a food supply position which stemmed essentially from the deficiencies of Belgium's agricultural economy.

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1. German requisitions, however, may have retarded the provision of a more adequate food basis for the country.

Statistical Appendix

Table I

ESTIMATED CONSUMER CATEGORIES IN BELGIUM,
Average 1942-1943

Normal consumers (urban)[a]:	
Aged 0 - 3	305,000
" 3 - 6	325,000
" 6 - 14	665,000
" 14 - 70	3,800,000
" 70 - up	400,000
Farmers[b]	1,500,000
Light workers[c]	450,000
Heavy workers[c]	260,000
Very heavy workers[c]	200,000
Miners[c]	95.000
TOTAL BELGIAN CONSUMERS	8,000,000[d]
Foreign soldiers and civilians[e]	50,000
GRAND TOTAL OF CONSUMERS	8,050,000

a Age distribution computed from American Red Cross Report, 10 November 1942. Total number of normal consumers obtained as residual by subtracting other categories from 8,000,000 total for Belgium.

b As estimated by Belgian Committee for Study of Post-war Problems.

c Derived from estimates in Ministry of Economic Warfare Report, Food Rationing in Belgium, 14 January 1943.

d Excludes approximately 300,000 Belgians employed in Germany.

e Estimated by OSS.

Table II

CURRENT LEGAL WEEKLY FOOD RATIONS IN BELGIUM[a]

Consumer Category[b]	Bread[c]	Sugar	Marmalade, Jam (in grams)	Fats[d]	Milk[e]	Meat	Eggs[f]	Potatoes	Coffee Tea, etc.[g]
Normal consumer . .	1,575	230	140	80	0	210	0	3,500	35
Light worker . . .	2,025	230	140	136	0	270	0	3,500	35
Heavy worker . . .	2,475	230	140	202	0	330	0	3,500	35
Very heavy worker .	2,925	230	140	268	0	390	0	3,500	35
Miner	3,825	230	140	664	0	450	0	3,500	35
Expectant and nursing mothers	2,415[h]	230	140	80	5,407[i]	315[j]	0	3,500	35
Children, 0 - 3 . .	1,575	230	140	80	5,407	210	0	3,500	0
Children, 3 - 6 . .	1,575	230	140	80	3,605	210	0	3,500	35
Children, 6 - 14 .	1,575	230	140	80	1,802	210	0	3,500	35
Adolescents, 14-18	1,575	230	140	80	1,802	210	0	3,500	35
Old people over 70	1,575	230	140	80	3,605	210	0	3,500	35

Source: Average Weekly Food Rations in Enemy and Enemy-occupied Countries, dated 21 June, 1943, Ministry of Economic Warfare.

See footnotes on following page

NOTES TO TABLE II

a Special Foods:
Candy: children and adolescents under 18, 70 grams
Fruits and vegetables: locally rationed
Cheese: 35 grams.
Fish: locally rationed by consumer lists.

b These categories actually exclude the farm population, which comprises almost 20 percent of the total population. Rations for these vary, depending upon the type of farm production.

c Or any of the following alternatives, of which total weekly rations for the normal consumer would be: flour, 1,160 grams; biscuits and pastes, 875 grams; diet food, 1,225 grams; gingerbread, 1,400 grams; pastries, 1,575 grams. For worker categories, proportionately more.

d Butter.

e Whole milk for expectant and nursing mothers and children up to 14; skimmed milk for adolescents 14-18 and people over 70.

f Reserved for expectant and nursing mothers and children 0 - 3 in industrial areas.

g 23 grams of chicory, 12 grams of coffee substitute.

h During fourth, fifth, and sixth months of pregnancy. From seventh month until childbirth and for two months thereafter, 2,345 grams.

i For fourth, fifth, and sixth months of pregnancy. From seventh month until childbirth and for three months thereafter, 7,210 grams, and from fourth to sixth month after childbirth, 2,380 grams.

j From seventh month of pregnancy until childbirth.

Table III

LEGAL RATIONS OF IMPORTANT FOODS BY TIME PERIODS[a]
(in grams per week)

Period beginning:	Normal consumer	Light worker	Heavy worker	Very heavy worker	Miner
Bread:					
2 June 1940 . . .	1,575	1,575	1,575	1,575	1,575
8 November 1940 .	1,575	1,575	3,150	3,150	3,150
1 February 1942 .	1,575	2,025	2,475	2,925	3,825
Sugar:					
2 June 1940 . . .	210	210	210	210	210
8 November 1940 .	230	230	230	230	230
Fats:					
2 June 1940 . . .	350	350	350	350	350
10 August 1940 .	175	175	175	175	175
9 October 1940 .	110	110	110	110	110
8 November 1940 .	105	105	158	211	211
8 December 1940 .	106	106	165	224	224
7 April 1941 . .	105	105	152	199	199
6 June 1941 . . .	105	105	205	372	372
1 February 1942 .	104	170	236	302	698
3 March 1942 . .	92	158	224	290	686
2 May 1942 . . .	81	147	213	279	675
1 June 1942 . . .	70	136	202	268	664
1 June 1943 . . .	80	136	202	268	664
Meat:					
August 1940 . . .	630	630	630	630	630
8 November 1940 .	350	350	700	700	700
6 June 1941 . . .	245	245	490	490	490
1 February 1942 .	245	315	385	455	525
1 June 1942 . . .	140	210	280	350	420
29 October 1942 .	210	280	350	420	490
1 June 1943 . . .	210	270	330	390	450
Potatoes:					
2 June 1940 . . .	3,500	3,500	3,500	3,500	3,500
July 1942	1,400	1,400	1,400	1,400	1,400
August 1942 . . .	2,100	2,100	2,100	2,100	2,100
29 September 1942	3,500	3,500	3,500	3,500	3,500

a Previous to 8 November 1940, no differentiation was made among consumer classes. On that date, new categories were established for Heavy and Very Heavy Workers. On 1 February 1942, the categories of Light Worker and Miner were added.

Source: Ministry of Economic Warfare, and Belgian newspaper reports submitted by cable.
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Table IV

DAILY CALORIE CONSUMPTION OF MAJOR CONSUMER CATEGORIES

Consumer category	Current[a] consumption (unadjusted)	Current[b] consumption (adjusted)	Nutritional standard
Normal consumer . . .	1,484	1,414	2,400-3,000
Light worker	1,748	1,678	3,150
Heavy worker	2,023	1,953	3,600
Very heavy worker . .	2,299	2,229	4,800
Miner	3,132	3,062	4,800
Expectant and nursing mothers .	2,444	2,374	2,800-3,000
Children, 0 - 3 . . .	2,074	2,004	1,200
Children, 3 - 6 . . .	1,879	1,809	1,500
Children, 6 - 14 . .	1,681	1,611	2,100-3,000
Adolescents 14 - 18 .	1,587	1,517	2,500-3,600
Old people over 70 .	1,690	1,620	2,000-2,600

a Computed on the basis of current legal rations and on the assumption that the rationed foods provide 90 percent of the total caloric intake in each consumer category.

b Adjusted for unavailability of rations. It is assumed that 83 percent of potato rations are obtainable.

Table V

AVERAGE WEEKLY FOOD CONSUMPTION
BY ADULT MALE WORKER, 1929

	In grams[a]	In calories[b]
Bread, flour, and cereals, in terms of bread	3,860	9,936
Sugar	290	1,154
Marmalade, jam, etc.	70	183
Fats	550	4,031
Milk	2,800	1,932
Meat	770	1,979
Eggs	195	308
Potatoes	4,300	3,655
Other foods		4,090
TOTAL PER WEEK		27,268
TOTAL PER DAY		3,895

a Based on Foreign Crops and Markets, USDA, 16 June 1941.

b Computed on basis of food weights shown and on the assumption that other foods provide 15 percent of total calories.

Table VI

NUTRITIONAL VALUE OF DAILY DIET[a]
(Proteins, Fats, and Carbohydrates)

Consumer category	Proteins	Fats	Carbohydrates
Normal consumer	42	21	239
Light worker	50	30	277
Heavy worker	58	41	311
Very heavy worker	66	51	345
Miner	80	101	410
Expectant and nursing mothers	84	56	344
Children, 0 - 3	69	44	282
Children, 3 - 6	60	41	269
Children, 6 - 14	51	31	257
Adolescents 14 - 18	51	22	237
Old people over 70	60	22	255

a Calculations based upon current legal food rations plus estimated consumption of unrationed and locally rationed foodstuffs. Eighty-three percent of potato rations are assumed to be available.

Table VII

ESTIMATED SUPPLIES OF WHEAT AND RYE IN BELGIUM
(in thousands of metric tons)

		Average 1935-39	1940-41	1941-42	1942-43
		(1)	(2)	(3)	(4)
	Wheat:				
A	Production.	432	250	350	400
B	Net imports	819	75	300	50
C	TOTAL WHEAT	1,251	325	650	450
	Rye:				
D	Production.	361	250	275	325
E	Net imports	199	315	10	100
F	TOTAL RYE	560	565	285	425
G	GRAND TOTAL	1,811	890	935	875

See footnotes on following page

NOTES TO TABLE VII

A-1 Average pre-war production figure, computed from International Yearbook of Agricultural Statistics, Rome
-2 Made on the basis of intelligence material available in the OSS. See also USDA, The Food Situation 1942-43 in Continental Europe, the Soviet Union, and North Africa 1 February 1943.
-3 Ditto.
-4 Ditto.
B-1 Average pre-war net imports, computed from International Yearbook of Agricultural Statistics, Rome.
-2 MEW Summary of Enemy Economic Developments, #122. Consists of 55,000 tons from France and 20,000 tons from German ordnance. This estimate may represent gross imports, since requisitions by the German armed forces have not been excluded.
-3 National Zeitung, Essen, 29 December 1941. Figure consists of 70,000 tons from France and 240,000 tons from Germany. Also see note to B-2.
-4 No data on imports available.
C-2 This represents supplies available for Belgian consumption before deductions have been made for requisitions by the German forces of occupation.
-3 Ditto.
-4 Ditto.
D-1 See note to A-1.
-2 See note to A-2.
-3 Ditto.
-4 Ditto.
E-1 See note to B-1.
-2 MEW Summary of Enemy Economic Developments, #122. Consists of 24,000 tons of rye flour from German ordnance and 292,500 tons of German rye.
-3 National Zeitung, Essen, 29 December 1941. Apparently covers imports only for second half of 1941. Figure for 1941-42 may therefore be considerably larger.
-4 No data on imports available.
F-2 See note to C-2.
-3 Ditto.
-4 Ditto.
G An effort was made to distinguish between imports of wheat and imports of rye. The form in which some of the information was available made this distinction difficult in some cases in the war years. The grand total of wheat and rye is therefore regarded as a more nearly accurate figure than the individual estimates of supply of wheat and rye.

Table VIII

ESTIMATED SUPPLIES OF POTATOES IN BELGIUM
(in thousands of metric tons)

	Average 1935-39 (1)	1940-41 (2)	1941-42 (3)	1942-43 (4)
A Production	3,181	1,800	2,300	2,500
B Net imports	41	46	142	na
C TOTAL POTATOES	3,222	1,846	2,442	2,500

NOTES TO TABLE VIII

A-1 Computed from International Yearbook of Agricultural Statistics, Rome.
-2 Made on the basis of intelligence material available in the OSS. See also USDA, The Food Situation, 1942-43, in Continental Europe, the Soviet Union, and North Africa, 1 February 1943.
-3 Ditto.
-4 Ditto.
B-1 See note to A-1.
-2 This figure consists of 38,000 tons of potato flour and 8,000 tons of potatoes, both from Holland. See MEW Summary of Enemy Economic Developments, #122, and also Die Tat, 8 August 1941.
-3 Bern Telegram, 20 August 1942, #3828 (P) states that German report from Brussels says that Germany furnished Belgium with 112,000 tons of food potatoes and 30,000 tons of seed potatoes.
-4 No information available.

Table IX

ESTIMATED SUPPLIES OF MEAT IN BELGIUM*

		Average pre-war (1)	1940 (2)	1941 (3)	1942 (4)
	Production:				
A	Beef and veal	140	141	120	120
B	Port**	128	96	48	40
C	Mutton	3	3	1	1
D	Horsemeat	6	8	3	3
E	TOTAL PRODUCTION	277	248	172	164
	Net imports:				
F	Beef (incl. imported live animals)	12			
G	Pork and bacon	4			
H	Mutton	1			
I	Horsemeat	9			
J	TOTAL NET IMPORTS	26			
K	TOTAL SUPPLIES	303	248	172	164

*Source: MEW, Belgium, Meat Production, 10/14/42.
**Deductions have been made for lard.

Table X

ESTIMATES OF SUPPLIES OF FATS IN BELGIUM
(in thousands of metric tons)

		Average 1935-39	1940	1941	1942
		(1)	(2)	(3)	(4)
	Butter:				
A	Production	63	50	42	38
B	Net imports	3	na	na	-6
C	TOTAL	66	53	42	32
	Margarine and prepared fats:				
D	Production	na	40	28	17
E	Net imports	na	na	na	na
F	TOTAL	60*	40	28	17
	Lard:				
G	Production	32	24	12	10
H	Net imports	2	na	na	na
I	TOTAL	34	24	12	10
J	GRAND TOTAL OF SUPPLIES OF FATS	160	114	82	59

*Estimate of Belgian Commission of normal consumption. No breakdown presented. Margarine was domestically produced from seeds and oils, virtually all of which was imported.

NOTES TO TABLE X

A-1 Computed from International Yearbook of Agricultural Statistics, Rome.
-2 Computed from Table XI.
-3 Ditto.
-4 Ditto.
B-1 See note to A-1.
-2 Not available, but believed to be negligible in 1940 and 1941. 6,000 tons exported to Germany in 1942.
-3 Ditto.
-4 Ditto.
D-2 Bern Telegram, 27 October 1942, #4857. Figures from official Brussels circles.
-3 Based on reports from official sources of monthly rates of production. See especially Het Laarste Nieuws, 27 February 1943.
-4 Ditto.
G-1 Computed from pre-war statistics on pork production.
-2 Computed from MLW estimates of pork production.
-3 Ditto.
-4 Ditto.
H-1 USDA, Agricultural Statistics, 1941.
-2 No information on imports or exports is available, but these are believed to be negligible.
-3 Ditto.
-4 Ditto.

Table XI

ESTIMATED SUPPLIES OF MILK IN BELGIUM
(in thousands of metric tons)

		Average 1935-39	1940	1941	1942
		(1)*	(2)**	(3)**	(4)**
A	TOTAL MILK OUTPUT	3,026	2,470	1,960	1,860
	Utilization:				
B	Livestock	363	340	340	335
C	Human	635	590	410	495
D	Butter	1,818	1,440	1,210	1,030
E	Cheese and other products .	210	100	***	***
F	TOTAL UTILIZATION	3,026	2,470	1,960	1,880

* Computed from International Yearbook of Agricultural Statistics, Rome, 1940-41.

** Based on MEW, Belgium, Milk Utilization, 14 October 1942, converted from liters at the ratio of 1.03 kilograms per liter.

***Negligible.

CONFIDENTIAL

Section II

FOOD IN FRANCE

1 July 1943

(24012)

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CONFIDENTIAL

FOOD IN FRANCE

SUMMARY

1. Current legal food rations and supplementary foods, usually rationed on a local basis, which are legally available in France provide over 50 percent of the minimal caloric requirements of most of the urban population.

2. Although the legal food rations are frequently unavailable, consumption "off the rations" constitutes very important supplements to the diets of many French people.

3. After allowing for German requisitions, the food supplies produced by French agriculture should permit ration increases of 50 percent in bread and potatoes and 20 percent in meats. If total supplies were equally distributed among the population, the caloric consumption of the average French consumer would be about 35 percent higher than is provided by legal rations and unrationed foods, fats consumption would be almost 40 percent higher, and carbohydrates intake would be about 25 percent higher. The farm population, and people with access to it, as well as the well-to-do, actually consume greater amounts in excess of what is legally available.

4. The state of health of the population as a whole is, of course, far better than is suggested by the level of legal rations, But the consequences of underconsumption and malnutrition have been severe for low-income urban consumers, (perhaps some 10,000,000 people) without ready access to the "surpluses" of the rural areas.

FOOD IN FRANCE

I. THE FOOD POSITION IN FRANCE

A. Under the Rationing System

Rationing was introduced in France shortly after the armistice. Almost from the beginning, the system was comprehensive and covered most of the main foodstuffs. The remainder were gradually subjected to one kind or another of local rationing. This combination of national and local control still prevails.

Before the armistice, an attempt to restrict consumption was made by the introduction of such measures as meatless days and the control of restaurant meals. Formal rationing was undertaken in July 1940, when sugar was subjected to control; in August, rice, alimentary pastes, bread, and fats were added to the list. On 23 September 1940, a comprehensive system was set up: bread, meats, fats, fish, sugar, alimentary pastes, rice, coffee, and milk were all included. Wine was added subsequently. Rationing of vegetables (including potatoes), fruits, fish, eggs and other products was instituted gradually, and only on a local scale. Quantities and procedures varied from locality to locality. Early in 1941, different rations for certain commodities were instituted for the unoccupied and occupied zones (with a tendency for rations in the latter to be higher.) By the middle of 1941, this distinction was removed legally, but the differences still remained. Indeed, it is more difficult to speak of "the scale of legal rations" for France as a whole than for any other European country. Official statements notwithstanding, rations continue to differ importantly in different parts of the country and among different groups of consumers.

Supplementary allotments of food for consumers with special requirements were also provided in the original decree of September 1940. Essentially, the categories set up at that time (the two classes of heavy workers, expectant and nursing mothers, children by age groups, and older people) are still in force. These, and our estimates of the number of people in each category, are shown in Table I.[1/] The total population for France as shown in the table excludes the population of Alsace-Lorraine and some 1,350,000 French now believed to be in Germany. It includes, on the other hand, about a half million foreigners (both soldiers and civilians) now living in France. Heavy and very heavy workers in the cities are estimated at 1,150,000. (This is below a peacetime estimate of these categories, since a disproportionately large number of this group is employed in Germany). The total farm population is estimated at 13,3 millions. Unlike the situation in other countries, a more or less complete rationing schedule has been announced for the rural population. These rations are below those for corresponding urban groups, with the exception of allocations to self-suppliers. It is permissible for producers of specific commodities to retain larger quantities of their production for themselves and family members. Actually, however, there have been many variations in the ration provisions for the rural population. All have stemmed from the inability of the government to restrict consumption in these areas. The rural population in France, as in other countries, continues to enjoy diets well above those of the rest of the population and not appreciably below pre-war consumption levels.

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1. Numbered tables appear in the appendix. The estimates shown in Table I have been prepared in this office, since no official information on numbers of people is available. The estimates must be considered preliminary and will be changed should later information warrant.

The special categories shown in the table also include those heavy workers, notably certain miners and "engine drivers", who receive supplementary food allowances even above those of the rest of the group. Similar allowances are available to pregnant women and nursing mothers, to families with large numbers of children, and to sick people whose illness is attested by a doctor's certificate.

In an attempt to increase the availability of foodstuffs to those in low-income groups, the French have differentiated restaurants into groups, and have fixed ceiling prices for restaurants catering to low-income classes. Recently, many de luxe restaurants have been converted to communal eating places for the poor. In general, food coupons have to be given up for meals consumed. During the last winter, communal feeding facilities have been expanded; distribution is made through schools, but particularly through kitchens and "community" restaurants in the larger cities. Part of the costs are borne by national relief groups (especially the Secours National). Coupons must usually be given up for foodstuffs, but such feeding assures an allocation of vegetables and other locally rationed commodities. There has also been an extensive development of factory canteens, where workers can obtain rationed foods (in exchange for coupons) and frequently, non-rationed or locally rationed foods. It is not unusual for large plants to maintain a communal garden under the care of the factory employees.

B. The Availability of Rations

There have been several adjustments in the size of rations since rationing was first begun. (See Table III). The changes indicate reductions but these are not as large, with the possible exception of meat, as those which have

occurred in other occupied areas. Of course, the initial rations set up in September 1940 were themselves not very generous. Nonetheless, the fact that declines did occur suggests that legal rations have not always been available in France. Information from France supports this belief, with respect to practically all commodities. The reports indicate great unevenness in the availability of foodstuffs in different areas. As a generalization from them, it can be stated that diets defined by the amounts shown above provide an upper limit to "legal" consumption for the various consumer categories taken as a whole.

Yet it is difficult to believe that French agriculture now provides so small a percentage of the food requirements of the French people. The French agricultural economy in normal times provided all but 15 percent of the caloric intake of its population. Pre-war consumption, moreover, was at a very high level. (See Table V). Some part of this relatively small deficiency was provided by the French empire in North Africa, access to which was retained until late 1942. There has, of course, been an important decline in the production of most products since the beginning of the war. Nonetheless, this decline does not provide a production basis so low that larger quantities of food could not be made available to the French people.

German requisitions from France constitute important drains upon her production. Requisitions from each year's harvests have increased; German demands for the year 1942-43, for example, exceed those of the previous year, despite the fact that France no longer has access to surpluses in Africa. It is probable that German takings this year will be large (though perhaps not up to the officially-stated demands). Yet the scale of German takings fails by far to explain the extent of decline in French consumption.

The factor which, more than any other, explains the discrepancy between French production levels and legal consumption levels is the disorganization of the distributive system. Not only are agricultural producers unwilling to surrender all their surplus, but the inefficiency of the authorities and the inadequacies of the transportation system aggravate distribution irregularities. Artificial surpluses thus created increase the unevenness in the availability of rations mentioned above. (These surpluses also facilitate the German requisitions). In such a situation, illegal marketing activities flourish.

The scale of such illegal activities cannot be estimated precisely,[1] but there is no doubt that they exist and that even the French authorities recognize their importance in providing a basis of consumption for the population.

Thus, Monsieur Bonnafous, Minister of Food and Agriculture, indicated that "14 million quintals of wheat have been diverted from proper use by the black market, fraud, feeding animals, use of counterfeit ration cards..."[2]; In a broadcast to French farmers on 9 April 1942, the late Admiral Darlan referred to the same situation in his remarks: "I am not unaware...that you also regret that you are unable to dispose frequently of your total production... Can you all conscientiously swear that your harvesting returns have been quite accurate?" A German estimate places black-market turnover at 50 percent of rationed foodstuffs.[3] Perhaps the best indication of the official recognition of this situation

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1. A rough attempt to do so for the 1942-43 crop year is made below.

2. Bern telegram #1401, 4/8/42.

3. Deutsche Allgemeine Zeitung, 11/17/42.

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is contained in a recent statement by Monsieur Bonnafous: "The principal aim of the government is to insure to some extent the supplying of some 12,000,000 Frenchmen entirely dependent on food cards."1/ Here, he clearly recognizes that the remaining millions are able to supply themselves sufficiently without help from the government. The same idea is expressed in a communication from Helsinki, that "90 percent of the French break rationing laws or buy in the black market. Scientists have proved that anyone eating exactly what ration laws allow would have starved to death, and it is no secret that there have been almost no cases of starvation."2/

The number of people participating in such illegal dealings is undoubtedly exaggerated by the figure of 90 percent referred to above. But such activities are not reserved only to the well-to-do classes, as is the case in other countries. Many urban Frenchmen have families and friends in the country. The extent to which food was thus brought from farms to cities resulted in the legalizing of a system of "gifts" which might be sent by farmers to relatives and friends in the cities, At one time, these gifts could contain only fresh vegetables, fruits, fish, game, poultry, eggs, potatoes, and some cereals. Now, even the basic rationed foods like butter and cheese can be included. The system of gifts certainly lent itself to maltreatment. The circle of families and friends was readily widened. "In November, 1942, there was a press report to the effect that 500,000 parcels had reached Paris in one week, and that the official collection of farm produce had declined in

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1. Bern telegram #320, 1/15/43.
2. Helsinki telegram #1112, 11/17/42.

direct proportion to the number sent."[1] Hence, the irregular distribution channels in France may really be considered as a means of contributing to the consumption of the French people on a broad scale.

C. Nutrition and Health of the Population

The quantities of the main foodstuffs which are now indicated as rations for the country as a whole are shown by consumer categories in Table II. Other foodstuffs, and the legal allowances for rural people, are given in the footnotes to that table.

Legal rations, as has been noted, provide less than a minimum sustenance, and the existence of substantial "black" and "white" markets has meant that most people in the country receive nourishment well above that furnished through legal channels. The rural population certainly maintains a standard close to that of pre-war years. Persons in the city who can afford to patronize the "black market" or who have friends in the country have a better diet than legal rations indicate. Most poorly off are those urban dwellers of low-income who must live on what legal rations provide them.

Tables IV and VI give a picture of the nutritional intake of the various consumer groups, if it is assumed that only legal quantities of rationed foods are eaten, and that unrationed foods are equally distributed among the various groups. Table VII contrasts the average nutritional intake of the population if, on the one hand, the entire supply of food is taken into account and if, on the other, only legally rationed and unrationed foods are considered.

It is seen that, on the basis of legal rations, the normal consumer receives 1,445 calories a day, or 60 percent

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1. Quoted from MEW Food Rationing in France, dated 10 December 1942, p. 16.

of his minimum caloric requirements. Combined with a protein consumption of only 41 grams a day and 20 grams of fat, such a standard indicates a food position detrimental to the maintenance of the health of such consumers. Similar computations for the worker categories reveal increased caloric intake, but the increases are smaller than the increased requirements of their occupations. Thus, calories computed both for heavy and very heavy workers are below 50 percent of the standard. Calories allotted to children under six, on the other hand, are above requirements. In considerable measure, however, this is due to the inclusion of potatoes and bread, which exceed the quantities actually consumed by these children. The important addition of milk and of chocolate permit a better balance in children's diets. Extra foods allocated to expectant and nursing mothers bring their caloric intake closer to the nutritional standard than is the case for any other adult group.

If, on the other hand, total supplies are considered and some attempt made to see to what extent dietaries are supplemented through extra-legal channels, it is seen that the average consumer in France (including rural as well as urban) receives 2,431 calories a day, a figure which approaches normalcy. Such a calculation, however, is based on the assumption that supplemental food is distributed equally throughout the population, an assumption which is false. It can be said most accurately that there are probably about 10,000,000 urban consumers whose caloric intake is about half of that required, while rural consumers and some urban consumers have a nearly normal diet. Between these two extremes lies the rest of the population. As might be expected on the basis of this analysis, reports on the health position in France suggest that the incidence of underconsumption and malnutrition is confined to those urban

consumers who must, for whatever reason, get along on the quantities legally available. Very severe consequences, of course, ensue for this group. Within it, the main sufferers are children and pregnant women. The following quotations from reports recently received are in point:

> "A test made in 1941 by the Rockefeller Foundation showed serious lack of ossification in adolescents, 18-21, as a result of undernourishment."1/

> "It is estimated that 1,000,000 children in all France need special care of a minimum of three months of supplementary feeding and favorable surroundings."2/

> "Medical circles report that the weight of one-half of newborn babies is less than 3 kilograms."3/

> "Despite special privileges and rations for pregnant women, embryos of six months are reported by physicians to be the size expected of two-month embryos. Newborn infants frequently weighed under three pounds, and there are many still births."4/

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1. Intercept BER #20747, 4/20/42.
2. Marseilles telegram #973, 9/25/42.
3. National Zeitung, Zurich, 7/27/42.
4. Interview #224, Survey of Foreign Experts, 2/9/43.

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II. FOOD BALANCES, 1942-43

On the basis of estimates of production and utilization available, and from estimates of probable requirements, a tentative balance of the basic foodstuffs in France can be presented for the current crop year ending 1 July 1943. Such balances permit a preliminary representation of some of the factors discussed above. All food requirements have been computed on the basis of legal rations available since 1 July 1942. The number of people in the various consumer categories is that shown in Table I. These categories exclude French civilians now resident outside of France, However, the German occupation forces are included.

The balances must be interpreted with care. In the first place, ration requirements are based on quantities that the Government expects to be able to collect for distribution to the non-agricultural population. They bear little relation to food requirements from either a psychological or physiological point of view. Because of the inefficiency of the collection system, French rations are particularly inadequate.

Secondly, withholdings by French peasants are so far above legal allowances that many consumers are unable to purchase rationed quantities through legal channels at many periods, despite the fact that total supplies are very much in excess of ration requirements.

A. Breadgrains (wheat and rye):

1. Minimum Requirements (metric tons).

Rations.....	2,500,000[1/]
Seed.....	800,000[2/]

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1. Requirements in terms of bread are estimated at slightly over 4,000,000 metric tons. The bread figure was converted to a flour basis (75 percent of the bread) corrected for admixtures (75 percent of the flour is wheat and rye) and converted to grain. The extraction rate used was 90 percent. The resulting figure is the 2,500,000 tons given.

2. See supplied at 2 bushels per acre.

Waste, unmillable grain, and industrial usage....	500,000[1]
Total.....	3,800,000

2. Supplies (metric tons).

Available for domestic consumption.....	5,350,000[2]

3. Balance of Requirements and Supplies. This balance shows an apparent surplus of 1,550,000 metric tons. However, the requirements picture shown may understate actual utilization. Thus German takings were estimated at 700,000 tons (100,000 tons of which cancelled imports from Africa). The German official request was for 850,000 tons, but official requests have not usually been fulfilled, and a subsequent announcement stated that German requisitions had been reduced by 200,000 tons.[3] Again, quantities collected for relief purposes by the Secours National and other agencies, and by factories for their canteens, may require an additional 150,000 to 200,000 metric tons. Even so, the "surplus" will probably remain close to the 1,400,000 ton mark.

The computation of legal rations provides farmers with consumption severely reduced from pre-war levels. Undoubtedly, too, there will be considerable feeding of livestock, despite the illegality of such feeding. Spread over the entire population, the quantity used illegally could provide a 50 percent increase in legal rations. It undoubtedly furnishes a larger increase for parts of the population.

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1. This item, including seed, is estimated at 20 percent of the total crop.

2. See Table VIII.

3. Minister Bonnafous, in a statement to the General Meeting of the Agricultural Corporative Union, quoted by Radio Paris on 5 April 1943.

B. Potatoes

1. Minimum Requirements. (metric tons).

Rations.....	4,000,000[1]
Potato flour.....	300,000[2]
Seed and waste.....	3,500,000[3]
Total.....	7,800,000

2. Supplies. (metric tons).

Available for domestic consumption.....	13,750,000[4]

3. Balance of Requirements and Supplies. The surplus of about 6,000,000 tons is a large one. It is not unlikely that German requisitions will exceed the amount already allowed for in the estimate of supplies available for domestic consumption. During peacetime years, the French used for fodder about 4,000,000 tons of potatoes. Although hog population has declined since that time, it is probable that the absence of other feeds has increased utilization per head of livestock. Nonetheless, there appear to be ample supplies available for consumption "off the rations." Such utilization has been frequently noted; a recent decree makes it illegal to provide family parcels with potatoes in excess of 50 kilograms per person. Again, even after allowing for use of seed for animal fodder, supplies should permit an increase of approximately 50 percent in current levels of consumption.

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1. Not rationed on a national scale, but local rationing indicates a legal level of about 2 kilograms per person per week throughout the country.

2. Used for admixture in bread.

3. Estimated at 25 percent of total crop.

4. See Table IX.

C. Meat.

1. Minimum Requirements. (metric tons).

Rations..... 700,000[1]

2. Supplies. (metric tons).

Available for domestic consumption..... 882,000[2]

3. Balance of Requirements and Supplies. German takings of 228,000 tons have been allowed for. Furthermore, actual consumption by the rural population will certainly exceed the legal levels. An additional 40,000 tons, it is estimated, will be utilized in this way. On the basis of supplies, however, it is still possible for rations to be increased as much as 20 percent above the present level. Current information from France suggests the possibility of reductions. Since even legal rations are not generally available, such a percentage probably understates the increase above the ration levels actually effective for large groups of the population.

D. Fats and Oils (metric tons).

1. Minimum Requirements (metric tons).

Rations..... 178,000

2. Supplies (metric tons).

Available for domestic consumption..... 383,000[3]

3. Balance of Requirements and Supplies. In interpreting this surplus, it must be pointed out that the future holds the

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1. Ration requirements amount to 552,000 tons at retail. This is held to be equivalent to approximately 700,000 tons shipped from the slaughter house. This compares with Laval's statement that 712,000 tons of meat were consumed via rations and permitted private slaughtering. Laval estimates clandestine slaughtering at 350,000 tons, almost double our estimates. He is interested in the higher figure in order to lay the blame for low meat rations on black market operations rather than on German takings. cf. Paris Mondial, 5 June, 1943.

2. See Table X.

3. This estimate for 1942-43 was prepared in this office. It has not yet been possible to present a continuous picture of fats and oils supplies in France during the war years. Allowance has already been made for the quantity of fats and oils estimated as German takings for this crop year.

prospect of an appreciable reduction in French supplies of fats and oils, due to the loss of imports from Africa. At present, it appears that, for the calendar year 1943, French supplies may not exceed 250,000 tons. However, reductions were made in consumer rations shortly after Africa was occupied, and it is consumption at the lower rate which has been used to compute requirements for the appropriate part of the current crop year. Hence, the balance, insofar as the estimates are correct, does present the picture for the year 1942-43. Even after allowing for increased consumption on the farms, a "surplus" in the vicinity of 100,000 tons seems to remain. It is well known that relatively little hog fat finds its way to the markets. Even butter deliveries are withheld. A substantial increase in the consumption of all Frenchmen could be permitted if farm retentions were reduced.

E. Milk.

1. Minimum Requirements (metric tons).

Rations..... 2,175,000[1/]

2. Supplies (metric tons).

Available for fluid milk consumption.... 3,100,000[2/]

3. Balance of Requirements and Supplies. This surplus is more apparent than real since, as was indicated, no allowance has been made for consumption by the farm population, most of which owns some cows. At the pre-war level of consumption by these groups, an additional 2,500,000 metric tons of milk would be required. It is unlikely that consumption by this

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1. As shown in Table II, this figure is based upon the expectation that only children, old people, pregnant women and nursing mothers (and the occupation forces) consume whole milk. Allowance has not been made in this estimate for consumption by the adult farm population.

2. See Table XI. This estimate is for the 1942 crop year. Utilization of milk in fluid form for human consumption is estimated at about 30 percent of total production; this was roughly the pre-war ratio.

group, even during the war years, will be appreciably below 1,600,000 tons.[1] Hence the "surplus" disappears. Rather, the balance indicated that rations in the cities cannot be fulfilled. Unavailability of milk, even for children, has frequently been reported.

F. Other Foods. The French situation in vegetables, fruits, and fish cannot be adequately discussed on an over-all national basis. On the whole, it is believed that consumption -- at least of vegetables -- has not fallen below that of pre-war years. But this statement conceals local variations which are fundamental to the consumption picture. The situation varies from town to town. It is not unusual to find a superabundance in an area only a few miles from one of great scarcity. It can certainly be said that wherever vegetables are rationed, their legal availability exaggerates consumption "on the rations," but always understates the actual availability of supplies.

Food supplies legally available to the French population are markedly out of balance with actual supplies available for consumption. Equitable distribution could raise legal rations to the point where they might provide a much larger percentage of the pre-war consumption level. Study of available statistics reveals that important contributions are made to French dietaries through illegal food consumption.

Under these circumstances, German requisitions from the French supplies are probably facilitated. However, even if the Germans were to obtain the full measure of their demands, French agriculture should still provide a much better

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1. The Journal of 22 December 1942 estimated that 2,060,000 tons of milk escaped official collection.

diet than is now received by important groups in the population. It is not likely that this situation will change unless, perhaps, action by the United Nations introduces the hope of new economic and political prospects for the French nation as a whole.

STATISTICAL APPENDIX

Table I

ESTIMATED CONSUMER CATEGORIES IN FRANCE,
JANUARY, 1943*

Normal consumers[a]	13,340,000
Urban children under 3	1,090,000
" " 3 - 7	1,570,000
" " 7 - 14	2,960,000
Urban adolescents 14 - 22	2,980,000
Urban old people 71 and over	1,300,000
Farm population:[b]	
Aged under 3	600,000
" 3 - 7	840,000
" 7 - 14	1,600,000
" 14 - 22	1,690,000
" 22 - 71	7,880,000
" 71 and over	700,000
Heavy workers (urban)[c]	1,000,000
Very heavy workers (urban)[c]	150,000
Expectant and nursing mothers (urban and rural)[c]	350,000
TOTAL FRENCH CONSUMERS	38,050,000
Foreign soldiers and civilians[c]	500,000
GRAND TOTAL OF CONSUMERS	38,550,000

*See footnotes and source on following page

FOOTNOTES TO TABLE 1

a The "normal consumer" category represents the urban population in the age group 22-71, after deductions have been made for the heavy workers, very heavy workers, and expectant and nursing mothers in the age group.

b The estimate of farm population is based on an estimate of the number of people employed in agriculture, presented in the Yearbook of Labour Statistics, International Labour Office, 1941.

c OSS estimate.

SOURCE TO TABLE 1

Prepared in the OSS. A total French population figure of 41,300,000 was used as the starting point of the calculations; from this total were subtracted the 1,900,000 estimated population of Alsace-Lorraine, and a further 1,350,000 representing the estimated number of French war prisoners and civilians now employed in Germany. These deductions result in an estimate of total French consumers at the beginning of 1943 (38,050,000). The distribution of this total between the various age categories was made on the basis of the estimated age distribution for 1940, as presented in the Statistical Yearbook of the League of Nations, 1940-41, after adjustments had been made for Alsace-Lorraine and French war prisoners and civilians now in Germany.

(810-2)

Table II

CURRENT LEGAL WEEKLY FOOD RATIONS IN FRANCE[a]
(in grams)

Consumer category[b]	Bread[c]	Sugar	Fats[d]	Milk[e]	Meat[f]	Cheese	Coffee, etc.[g]
Normal consumer...	1,925	185	70	0	120	50	35
Heavy worker[h].....	2,450	185	145	0	225	50	35
Very heavy worker.	2,450	185	210	0	330	50	35
Expectant mothers[i]	2,450	250	h	3,605	h	75	35
Children under 3..	700	360	70	5,407	120	50	0
Children 3 - 6....	1,400	185	70	5,407	120	50	0
Children 7 - 13...	1,925	185	70	1,802	120	50	0
Young people 14-22	2,450	245	70	1,802	205	50	?
Consumers over 70.	1,400	185	70	0	120	50	35

Source: Food Rationing in France, dated 10 December 1942, and Average Weekly Food Rations in Enemy and Enemy-occupied Countries, dated 21 March 1943, Ministry of Economic Warfare; or French newspaper reports transmitted by cable, provided the most recent information.

See footnotes on following page.

NOTES TO TABLE II

a Special Foods:

Alimentary pastes: expectant mothers, 110 grams; all children under 6 and old people, 60.
Rice: children under 3, 75 grams; children 3-6, 50 grams.
Potatoes: rationing is still local; in practice, 3,000 grams per week is generally available now.
Eggs: Locally rationed; very scarce in most districts. Usually one egg per month available, with two for children, young people and pregnant and nursing mothers.
Chocolate: children 3-13.... 30 grams
consumers over 70. 30 grams
Sweets: children under 13 and old people, 30 grams.
Jam: miners 230 grams. Locally rationed to others.
Grape sugar: Children under 3. 60 grams
Adolescents 12-21 60 grams
Old people..... 60 grams
Children 3-13... 120 grams
Saccharin: rationed (amount not known).
Wine: Normal consumer 4 liters per month
Heavy and very heavy workers. 8 to 12 liters per month
Miners..... 7.5 liters
Flour: children under 6 and old people, 60 grams.
Vegetables, poultry, fish, fruit, jam, eggs, and potatoes locally rationed in some districts

b Consumers over 21 employed in agriculture (either as working farmers or as farm laborers) receive the heavy workers' bread ration. In addition, self-suppliers of grain, meat, milk, sugar, potatoes, oilseeds or wine receive extra allowances of the foods they produce.

Special rations are allotted to miners working more than 50 hours underground and to engine drivers as follows:

	Miners	Engine-drivers	
Bread....	4,200	3,500	grams
Meat.....	525	520	"
Jam.....	250	.....	"
Potatoes.	Miners receive an extra potato card, entitling them to 4,000 grams under current rations.		

Each child in school receives supplementary weekly rations (meat 180 grams, fats 200 grams, sugar 60 grams, alimentary pastes 60 grams, dried vegetables 60 grams, potatoes 700 grams). Families with at least 8 children under 21 also receive these supplementary rations for each child.

Germans resident in France receive special ration cards entitling them to supplementary amounts of sugar, meat, and fats. German and French soldiers on leave receive generous rations for the leave period.

c Pastries and gingerbread on specified bread coupons instead of bread.

d These rations apply to urban consumers. Rations for rural consumers are:

Normal consumer.. 55 grams
Heavy worker..... 130 grams
Very heavy worker 205 grams

e Whole milk. Children under 2 receive "absolute priority" to milk supplies. Various classes of invalids are also entitled to milk. Consumers are entitled to milk in the following order of priority:

1.	Children under 2.....	5,407 grams
2.	Patients on milk diet.....	10,815 "
3.	Children 2 - 6.....	5,407 "
4.	Children 6 - 13.....	1,802 "
5.	Expectant mothers.....	3,605 "
6.	Other patients than (2).....	1,802 "
7.	Members of "Association des Grandes Malades", paralyzed persons, and children 13-21.	1,802 "

In addition to their whole milk rations, children up to 12 months receive sweetened dried milk, and children from 12 to 18 months receive unsweetened dried milk.

f Table shows rations for urban consumers. Rural consumers' rations are:

Normal consumer...	180 grams
Heavy worker.....	285 grams
Very heavy worker.	390 grams

g Mixture of 10 percent real coffee with substitutes; alternatives of chicory, roasted malt, tea and substitutes, or a mixture of cocoa and flour.

h Included in the "heavy worker" category (besides consumers of both sexes between 21 and 70 performing heavy physical labor) are pregnant women and nursing mothers (for bread ration only, so far as is known), mothers of at least 3 children under 12, consumers with only one usable arm or leg, blind and tubercular persons, and patients requiring extra food on a doctor's certificate.

i Expectant mothers (from the fourth month of pregnancy) are entitled to heavy workers' bread rations, and to supplements of sugar, milk and cheese, as shown on the table. Supplements allowed for fats and meat probably bring totals of these foods up to 120 and 430 grams respectively. Nursing mothers receive the same rations of bread and milk as pregnant women. It is possible, also, that nursing mothers receive their babies' food rations in addition to their own.

Table III

LEGAL RATIONS OF IMPORTANT FOODS FOR URBAN CONSUMERS
BY TIME PERIODS
(in grams per week)

Period beginning:		Normal consumer	Heavy worker	Very heavy worker
Bread:				
August 1940....		2,100	2,100	2,100
September 1940.		2,450	2,450	2,450
October 1940...		2,450	3,150	3,150
February 1941..	unoccupied	2,100	2,800	2,800
	occupied..	2,450	3,150	3,150
March 1941.....	unoccupied	1,680	2,800	2,800
	occupied..	2,450	3,150	3,150
April 1941.....	unoccupied	1,680	2,275	2,275
	occupied..	1,925	2,450	2,450
May 1941.....	unoccupied	1,680	2,275	2,275
	occupied..	1,925	2,450	2,450
June 1941.....	both zones	1,925	2,450	2,450
July 1941.....	both zones	1,925	2,450	2,450
Meat:				
September 1940.		360	360	360
April 1941.....	unoccupied	250	310	310
	occupied..	300	360	360
May 1941.....	both zones	300	360	475
July 1941.....	both zones	250	355	460
December 1941..	both zones	180	285	490
April 1942.....		250	355	460
May 1942.....		250	355	460
April 1943.....		120	225	330
Fats:				
August 1940....		50	50	50
September 1940.		100	100	100
May 1941.....		120	195	270
June 1941.....		120	195	270
August 1941....		150	225	300
September 1941.		120	195	270
October 1941...		100	175	250
April 1942.....		100	175	250
December 1942..		70	145	220

Source: Ministry of Economic Warfare
(24012)

Table IV

DAILY CALORIE CONSUMPTION OF MAJOR CONSUMER CATEGORIES

	June 1943	Nutritional Standard
Normal consumer.....	1,445	2,400-3,000
Heavy worker.....	1,761	3,600
Very heavy worker....	1,962	4,800
Expectant and nursing mothers.....	2,179	2,800-3,000
Children under 3.....	1,659	1,200
Children 3 - 6.....	1,841	1,500
Children 7 - 13.....	1,607	2,100-2,500
Young people 14 - 21.	1,736	2,500-3,600
Consumers over 70...,	1,324	2,000-2,600

Source: Based on current legal food rations and estimated consumption of unrationed foods.

Table V

PRE-WAR AVERAGE PER CAPITA WEEKLY FOOD CONSUMPTION
(RECENT YEARS)[a]

	In grams	In calories
Bread, flour, and cereals, in terms of bread.....	3,800-4,000	9,576-10,080
Sugar.....	350	1,393
Fats.....	400-450	2,932-3,298
Milk.....	2,000	1,380
Cheese.....	100-110	352-387
Meat.....	820	2,107
Potatoes.....	2,750[b]	2,337
Eggs.....	160	253
Wine.....	2,700[c]	1,782
Other foods[d].....		1,000
TOTAL PER WEEK.....		23,112-24,017
TOTAL PER DAY.....		3,302-3,430

a Based on Foreign Crops and Markets, 23 June 1941, pp. 1030-1032.

b Calculated from figures in Report #411, dated 18 September 1941, American Embassy at Vichy.

c Based on Foreign Agriculture, January 1940.

d Estimated minimum consumption of vegetables, fruits, fish, poultry, etc.

Table VI

NUTRITIONAL VALUE OF DAILY DIET[a]
(Proteins, Fats and Carbohydrates)

Consumer category	Proteins (grams)	Fats (grams)	Carbohydrates (grams)
Normal consumer..	41	20	316
Heavy worker.....	52	32	425
Very heavy worker	56	42	494
Expectant and nursing mothers	81	57	366
Children under 3.	55	56	191
Children 3 - 6...	64	52	276
Children 7 - 13..	51	32	282
Children 14 - 21.	60	34	312
Consumers over 70	36	22	230

a Computed from current legal food rations plus estimated consumption of unrationed and locally rationed foodstuffs.

Table VII

NUTRITIONAL VALUE OF AVERAGE DAILY DIET

	Unadjusted[a]	Adjusted[b]
Calories.....	1,566	2,431
Proteins (grams).....	50	85
Fats (grams).....	31	50
Carbohydrates (grams)	297	409

a Weighted average based on 1942-43 legal food ration and unrationed foodstuffs. Rural population not included.

b Based on current food supplies on the assumption that supplies are equally distributed among all income groups in all regions of the country.

Table VIII

ESTIMATED SUPPLIES OF WHEAT AND RYE IN FRANCE
(in thousands of metric tons)

		Average pre-war	1940-41	1941-42	1942-43
		(1)	(2)	(3)	(4)
	Wheat:				
A	Production.	8,000	4,300	6,400	5,400
B	Net imports	345	- 300	- 450	- 600
C	TOTAL WHEAT	8,345	4,000	5,950	4,800
	Rye:				
D	Production.	750	610	470	550
E	Net imports	*	**	**	**
F	TOTAL RYE	750	610	470	550
G	GRAND TOTAL	9,095	4,610	6,420	5,350

* Negligible.

** Not available, but believed to be negligible.

See footnotes on following page.

NOTES TO TABLE VIII

A-1 Computed from the International Yearbook of Agricultural Statistics, Rome.
-2 See the following: (1) National Zeitung, 11/21/41; (2) MEW Summary of Enemy Economic Developments, #121 and also # 105.
-3 Bern telegram, #6216, 12/30/42 (from Bank of France Report for October 1942).
-4 CID 36430, 24 May 1943.
B-1 See note to A-1.
-2 BEW Food Situation in Unoccupied France, 5/1/42. This figure is based on an estimate of German takings of 600,000 tons and imports from North Africa of 300,000 tons. See also MEW Summary of Enemy Economic Developments #97, 7/23/41.
-3 This figure is based on an estimate of 700,000 tons to Germany, including 70,000 tons which were shipped to Belgium, and imports of 250,000 tons from North Africa. See (1) OSS #20179S, 8/24/42; (2) MEW Summary of Enemy Economic Developments, #121 and #97; (3) MEW France and French Colonies, #112, 10/30/42; (4) London telegram, #3919, 7/15/42.
-4 This figure is based on an estimate of 700,000 tons to Germany and imports of 100,000 tons from North Africa. See Algeria telegram, #403, 6/21/42; also MEW France and French Colonies, #112, 10/30/42.
D-1 Computed from the International Yearbook of Agricultural Statistics, Rome.
-2 USDA, The Food Situation, 1942-43, in Continental Europe, the Soviet Union, and North Africa, 1 February 1943.
-3 Bern telegram, #3044, 6/30/42.
-4 See note to D-2.

Table IX

ESTIMATED SUPPLIES OF POTATOES IN FRANCE
(in thousands of metric tons)

	Average pre-war (1)	1940-41 (2)	1941-42 (3)	1942-43 (4)
A Production.....	16,000	9,000	13,000	14,000
B Net imports.....	85	- 100	- 125	- 250
C TOTAL POTATOES	16,085	8,900	12,875	13,750

NOTES TO TABLE IX

A-1 Computed from the International Yearbook of Agricultural Statistics, Rome.
-2 See American Consulate at Lyons, Report #128, 2/19/41. Also MEW Summary of Enemy Economic Developments, #116, and U.S. Censorship Intercept, #31435, 9/20/41.
-3 See (1) U.S. Censorship Intercept #31435, 9/20/41.
(2) MEW Summary of Enemy Economic Developments, #116,
(3) MEW France and French Colonies, 2/23/42.
-4 See (1) Bern telegram, #4316, 9/22/42, (2) Bern telegram, #4395, 11/1/42, (3) London telegram, #6126, 11/2/42.
B-1 See note to A-1.
-2 OSS estimate.
-3 Vichy telegram, OSS #5716(S), 8/10/42.
-4 Bern telegram, #4883, 10/29/42. Also see Review of the Foreign Press, #166A, 12/7/42.

Table X

ESTIMATED SUPPLIES OF MEAT IN FRANCE*
(in thousands of metric tons)

	Average pre-war (1)	1940-41 (2)	1941-42 (3)	1942-43 (4)
Beef and veal:				
Production	875	950	850	700
Net imports[a]	14	-100	-120	-150
AVAILABLE FOR CONSUMPTION	889	850	730	550
Pork (excluding lard):				
Production	675	800	500	300
Net imports[a]	3	-100	- 80	- 78
AVAILABLE FOR CONSUMPTION	678	700	420	222
Mutton and goatmeat:				
Production	105	120	110	100
Net imports	10	0	0	0
AVAILABLE FOR CONSUMPTION	115	120	110	100
Horsemeat:				
Production	45	45	25	10
Net imports	b	0	0	0
AVAILABLE FOR CONSUMPTION	45	45	25	10
ALL MEATS:				
PRODUCTION	1,700	1,915	1,485	1,110
NET IMPORTS	27	- 200	- 200	- 228
AVAILABLE FOR CONSUMPTION	1,727	1,715	1,285	882

a For the war years, the figures represent German requisitions.

b Imports of horsemeat were small and were included under imports of beef and veal; they are not available separately.

*Source: Pre-war estimates have been computed from the International Yearbook of Agricultural Statistics, Rome. Estimates for the war years have been made on the basis of intelligence material available in the OSS. Exports to Germany in 1942-43, from address by Pierre Laval, Paris Mondial, 5 June 1943.

Table XI

ESTIMATED PRODUCTION AND UTILIZATION OF MILK IN FRANCE*
(in thousands of metric tons)

	Average pre-war	1940	1941	1942
TOTAL OUTPUT OF MILK.....	14,800	12,000	11,000	10,000
Utilization of milk:**				
Human consumption (fluid)	4,400	3,900	3,400	3,100
Livestock.....	3,600	3,000	2,800	2,600
Butter.....	4,600	4,000	3,800	3,300
Cheese and other products	2,200	1,100	1,000	1,000
TOTAL UTILIZATION.....	14,800	12,000	11,000	10,000

*Source: Pre-war figures obtained from the International Yearbook of Agricultural Statistics, Rome, and from the MEW's France, Milk Utilization, dated 10/14/42. The estimates for the war years are derived partly from MEW estimates and partly on the basis of intelligence material available in the OSS.

**The figures on milk utilization refer only to the purposes for which the total output of milk were used. No deduction has been made for exports of milk or milk products. These were very small in pre-war years.

SECTION III

FOOD IN THE NETHERLANDS

1 July 1943

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CONFIDENTIAL

FOOD IN THE NETHERLANDS

SUMMARY

1. Current legal food rations and supplementary non-rationed foodstuffs available in the Netherlands provide about 80 percent of the caloric requirements of most of the urban population.

2. Legal food rations (excepting potatoes) are usually available. Farm populations tend to retain more than their rations, but neither these retentions nor other illegal distributions now cut heavily into the supplies available to the bulk of the population.

3. The Netherlands' food situation has deteriorated gradually to its present position. Further ration reductions, especially in meats and fats, will take place unless German requisitions of these foodstuffs continue to decline.

4. Dietary deficiencies have tended to reduce the resistance of the population to disease and epidemics. This is particularly true for older children. Severe cases of underconsumption and malnutrition are rare, however.

5. The Netherlands as a whole remains one of the better-fed countries of occupied Europe.

FOOD IN THE NETHERLANDS

I. THE FOOD POSITION IN THE NETHERLANDS

A. Under the Rationing System

Provisions for insuring the Netherlands food position were instituted even prior to the war; formal rationing both of foodstuffs and of feedstuffs was first introduced immediately after the beginning of the war. It was only subsequent to the German invasion, however, that comprehensive rationing of basic foodstuffs was undertaken. The range of foodstuffs covered was enlarged during the first war years. With the important exceptions of vegetables and fruits, most foodstuffs are now rationed in the Netherlands.

As early as May 1938, the Netherlands Government established a system of increased grain reserves. Also, procedures were begun for taking a complete inventory of agricultural produce and stocks. In September 1938, legislation authorizing rationing was passed. After the outbreak of war, sugar rationing, effective October 16 1939, was introduced. Soon after, coffee was rationed. Bread was subjected to control in June 1940, and fats in the next month. Meat and cheese were rationed in September and November 1940, respectively. Before the end of the 1940-41 crop year, milk was rationed and its fat content reduced to a "standardized" 2.5 percent, and potatoes were subjected to control. Although there were many changes throughout this period in the scale of rations, this essentially completed the list of foods under ration control. A small addition was made when chocolate and sweets were put on the list in May 1942.

With the introduction of fats rationing in July 1940, a system of supplementary allowances for special categories was begun. Provisions for variations in allotments accompanied practically all the subsequent rationing decrees. The distinctions are made on the basis of occupation and age groupings.
(24014)

These and our estimates of the number of people in each category are shown in Table I.1/ The special worker categories are estimated to include about 800,000 persons, somewhat less than 10 percent of all the people in the Netherlands. The agricultural population comprises about 1,500,000 persons. For them, no complete rationing schedule has been announced, but special allotments of higher rations are allowed to farmers producing the particular rationed food. Farmers are entitled to normal rations of foods of which they are not self-suppliers. However, such controls cannot be readily exercised amongst the agricultural population; there is reason to believe that the farm population in general consumes extra amounts of practically all the rationed foods. As in other countries, food consumption by the agricultural population has not been curtailed appreciably from its pre-war levels. The rationing system also provides special food allocations for expectant and nursing mothers, for the sick, and for those who are making special contributions to the German war effort. Extra quantities of foods are given to families for festive occasions, such as weddings.

Some provisions exist for assisting people of low incomes in improving their diets. Thus, margarine quantities are frequently reserved for low-income families; extra potato rations are also made available to them. The meat rationing system provides an alternative of enlarged quantities of various processed meats so that they can be more accessible to low-income families. Although restaurant prices are fixed at different levels for the different classes of restaurants, extensive facilities do not exist for communal feeding. Nonetheless, food kitchens providing potatoes, vegetables, and soup have been set up in Amsterdam and some of the larger towns.

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1. Numbered tables appear in the appendix.

B. The Availability of Rations

Legal rations in the Netherlands have undergone many changes since rationing was first introduced. (See Table III). With the exception of potatoes (and sugar), rations of the basic foodstuffs are lower than they were at any earlier time. The reductions are particularly important for fats and meats. Fats rations for normal consumers are now under 150 grams per week as against the 250 grams issued when rationing was begun. Meat for the corresponding consumer group is now rationed at 125 grams weekly to compare with 500 grams in the last quarter of 1940. However, the changing meat and fats rations reveal during each year a cyclical pattern, with reductions tending to move up and down with the seasons. Nonetheless, the levels about which these fluctuations occur have been declining. While it is true that, preceding a reduction in rations, they were generally more difficult to obtain, there is little indication of any prolonged period during which the legal rations were not fully available in the Netherlands. The same is not true of potatoes, shortages of which always occurred toward the end of the crop year.

With the exception of the potatoes, ration levels of consumption are good indices of the quantities of rationed foods available to the population.

The reasons for the decline in the level of rations are readily understood. The Dutch agricultural economy had been adjusted to an export market, particularly for livestock products and vegetables. Correspondingly, it depended upon imports, especially of grains, both for human and animal consumption, and of protein feedstuffs. When the Netherlands was cut off from these imports, a curtailment in the output of livestock products was inevitable, although production of certain livestock products could be increased for a short while

as a result of the livestock slaughterings necessary. In some measure, this situation was intensified -- as far as rations for urban consumers were concerned -- as a consequence of the tendency by farmers to withhold their livestock products from the market. Gradually this tendency has been counteracted. The principal factors bearing upon ration levels now stem from the over-all supply position rather than from the irregularities of distribution.

The Netherlands food position has deteriorated significantly in the crop year 1941-42. Prior to that time, rations which permitted a comfortable level of consumption existed. Agriculture had not yet made important adjustments from the pre-war period; also stocks had been accumulated. In the 1941-42 season, adverse weather conditions aggravated the effects that, in any case, would have resulted from the inability to maintain livestock production. Increased slaughterings permitted, for part of that year even, larger meat rations than the basic livestock position warranted. Nonetheless, these rations were still smaller than they might have been had not Germany requisitioned important quantities of meat and fats. German takings thus accelerated the decline in the fats and meat position. These takings will also lengthen the period necessary to stabilize livestock production; and when stability is accomplished, it will be at a lower level than might otherwise have been the case.

A wartime shift of agriculture into more grains, more potatoes, and more vegetable oil crops will bring some balance into the Netherlands agricultural economy. Any balance that will be achieved, however, must, of course, imply a food position below that of pre-war years. Nonetheless, the new levels will not be significantly different from those now prevailing.

(24014)

C. Nutrition and Health of the Population

Quantities of basic foodstuffs as currently rationed are shown by consumer category in Table II. On the assumption that legal rations are available, the caloric value of the daily dietary can be computed. The normal consumer, on this basis, receives about 2,070 calories per day. (See Table IV). This is about 85 percent of the minimal nutritional standard. Similar calculations for the worker categories provide the heavy worker with 2,890 calories or 80 percent of the standard, and very heavy workers with 3,900 calories or 81 percent of the 4,800 required.

Caloric value of food allowed for children up to 14 exceeds requirements by a significant margin. It is likely that the "extra" food for children under 4, in particular, contributes to increases in the dietaries of the adult population.

The nutritional value of the actual daily dietary of the various consumer groups in terms of proteins, fats and carbohydrates is shown in Table VI. While some deficiency exists with respect to the fat content of the dietary, with respect to the nutritive value of food intake, the average Netherlands consumer is probably better off than the average consumer of most occupied European countries. Before any evaluation of the effects of the present dietary upon the health of the population can be made, a comparison between the pre-war and present standard is needed. Since the pre-war Netherlands consumer was accustomed to a relatively high dietary level, the apparently small nutritive deficiency may have substantial physiological and psychological effects.

The Netherlands food situation has not yet imposed severe strains on the health of the population as a whole. Important exceptions to this generalization do, of course,

exist. The curtailment in foodstuffs and its distribution among the various groups were such that they could have been borne by persons whose nutritional situation was adequate in pre-war years or preferably through the crop year 1940-41. Dietary deficiencies during the war years have been most marked in the case of low-income groups who were not in this position.

This general statement is borne out by reports from the Netherlands on the health situation there. The population has been less resistant to contagious diseases. Increased cases of tuberculosis, influenza, and pneumonia are recorded, (although various specific enumerations of these increases may well be exaggerated).1/ Heaviest incidence seems to occur among the older children.

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1. See, for example, the report from Monthly Review of Central Statistical Bureau, as published in Economische Mededeelingen, Department van Handel, Jijverheid en Scheepvaart, August 1942. The same information is supplied in various other intelligence reports (MEW #37, 23 Oct. 1942), but undoubtedly stems from the same source.

(24014)

II. FOOD BALANCES, 1942-43

From estimates of production and utilization now available, and from estimates of probable requirements, it is possible to present a balance of the basic foodstuffs in the Netherlands for the crop year ending 1 July 1943. The balance permits a quantitative presentation of the factors discussed in the earlier section on the availability of rations. All food requirements have been computed on the basis of rations legally available in June 1943. The number of people in the various consumer categories is that shown in Table I. Included in ration requirements are the quantities needed to feed German soldiers and civilians now believed to be in the Netherlands.

The following food balances must be interpreted with considerable care. In the first place, there has in the past been a very deliberate attempt in Holland to adjust legal rations to available supplies. Even though requirements from the point of view of legal rations be met, the diet may still be inadequate from the psychological and physiological points of view.

Secondly, a close correspondence between total supplies and requirements as defined means that rations could be met if the distribution system operated effectively. Actually, the substantial scope of black market operations in the Netherlands in addition to retentions by farmers for personal consumption in excess of legally authorized quantities means that not all people will be able to purchase their legal rations at all times unless indicated supplies substantially exceed rationed requirements. The black market operations circumvent the equality of consumption among different groups of consumers that would result from the effectual operation of the legal rationing system.

A. Breadgrains (wheat and rye):

1. Minimum Requirements (metric tons).

Rations.....	610,000[1]
Seed.....	55,000[2]
Waste and unmillable grain.....	90,000[3]
Total.....	755,000

2. Supplies (metric tons).

Production.....	960,000[4]

3. Balance of Requirements and Supplies. If the pattern of utilization shown above is fulfilled, there should be no difficulty in meeting rations with comfort. However, requirements at the farm will certainly be much larger than as provided for above. Consumption by the farmers will probably be even greater than indicated in our assumed rations of 2,700 grams weekly. Much more important is the quantity of grain that will be utilized for livestock feeding. The "surplus" shown above is less than normal feeding (particularly of rye) to livestock in pre-war years. A significant quantity of grain will continue to be fed. Hence, it is likely that production will not exceed requirements; on the other hand, legal rations should be maintained and should be available to all consumers.

---

1. Requirements in terms of bread are estimated at 914,000 metric tons. The bread figure was converted to a flour basis (75 percent of the bread), corrected for admixtures (80 percent of the flour is wheat and rye), and converted to grain (an extraction rate of 90 percent for grain). The resulting figure is the 610,000 metric tons given.

2. Seed supplied at 2 bushels per acre.

3. Seed, waste, and unmillable grain estimated at 15 percent of production.

4. See Table VII.

B. Potatoes.

1. Minimum Requirements. (metric tons).

Rations.....	2,035,000
Potato flour...	125,000[1]
Seed and waste,	550,000[2]
Total.....	2,710,000

2. Supplies (metric tons).

Production....	3,000,000[3]
Exports.....	325,000
Net Supplies	2,675,000

3. Balance of Requirements and Supplies. The above balance seriously understates the actual deficiency. In pre-war years, at least a quarter of a million tons of potatoes were fed to livestock and close to three-quarters of a million tons were grown specifically for industrial purposes (starch). Furthermore, greater consumption of potatoes by farmers than has been allowed (same as for heavy workers) is not improbable. Despite the 75 percent reduction in hog numbers, the shortage of fodder suggests that farmers diverted 100,000 tons of potato production to livestock. Probably not less than another 400,000 tons are used for starch manufacture. Altogether, it seems doubtful that any more than 75 percent of the 2,035,000 tons estimated as necessary to meet rations will actually be available. For non-producers without access to the black market, the extent of unavailability should be even greater. Before the end of the crop year, 1942-43, the potato situation had probably become quite difficult. As in previous springs, it may have been impossible to meet the rations of the Dutch consumer.

---

1. Used for admixture in bread.
2. Estimated at 18 percent of total crop.
3. See Table VIII.

C. Meats.

1. Minimum Requirements (metric tons).

Rations... 135,000[1]/

2. Supplies (metric tons).

Production 178,000[2]/

3. Balance of Requirements and Supplies. The Netherlands still provides Germany with meat supplies. Estimates made in this office place German takings for the crop year just ended at 50,000 tons. A reduction of this magnitude will bring the supply picture into close correspondence with ration requirements. It should be indicated that consumer rations have changed four times since 1 July 1942. As of 25 March 1943, rations were less than half the level of the beginning of the crop year. The present level of meat rations places consumption on an annual basis at less than 100,000 tons. It is clearly true, therefore, that the current ration reduction is again a reflection of the supply position. If considerable quantities of meat are consumed off the rations, it will not even be possible to maintain the current low ration rates. On the other hand, any return to a higher ration level must be predicated upon reductions in German requisitions from the Netherlands.

D. Fats and Oils.

1. Minimum Requirements (metric tons).

Rations... 81,000

2. Supplies (metric tons).

Production 100,000[3]/

---

1. Ration requirements amount to 110,000 tons at retail. This is held to be equivalent to 135,000 tons shipped from the slaughter house.

2. See Table IX. This figure is our estimate for 1942; it is probable that production for the crop year ending on 30 June 1943. will be less than this figure, since the output of beef and veal is expected to decline.

3. See Table X. The figure is an estimate for 1942; it is expected to be somewhat smaller for the crop year 1942-43.
(24014)

3. Balance of Requirements and Supplies. German requisitions from the Netherlands have been estimated in this office to be about 15,000 tons for the crop year 1942-43 (as against 20,000 tons for the previous crop year). This again results in a close balance between requirements at the current ration levels and supplies available for domestic consumption. Little room is permitted for black market operations if fats rations are to continue to be available. On the other hand, a probable decline in production for the coming year may necessitate a further reduction in rations -- unless German requisitions are diminished.

E. Whole Milk.

1. Minimum Requirements (metric tons).

Rations... 405,000[1/]

2. Supplies (metric tons).

Production 550,000[2/]

3. Balance of Requirements and Supplies. Despite the apparent surplus, it is likely that the requirements for fluid milk will press hard upon the estimated quantities available. Again, this is due to the fact that large parts of the adult farm population will consume whole milk. If, for example, it was assumed that, for each member of the farm population, 3/4 of a liter of whole milk were reserved daily, total milk requirements would be raised to about

---

1. As shown in Table II, this figure is based upon the expectation that only children, pregnant women and nursing mothers and occupation forces consume whole milk. This latter group is assumed to have 3/4 of a liter per day. Allowance has not been made for consumption by adult farm population.

2. See Table XI. This estimate is for 1942; it is applicable to the 1942-43 crop year. As shown in Table X this figure is not really an estimate of production, but an estimate of that percentage of production which will be available for human consumption made in whole milk form.

665,000 metric tons. Such a retention for farm consumption is below pre-war consumption levels. It is only through an even smaller farm consumption that a balance in the whole milk picture can be achieved. It is certainly true, therefore, that, after eliminating the supplies of milk consumed by the farm population, the quantity available will not exceed the rations of the urban consumers.

F. Other Foods. The Netherlands has always been a surplus vegetable-producing area; vegetable production during the war years has increased. German takings have increased also, but it is probable that vegetable consumption is maintained at close to the pre-war levels. Since vegetables are not rationed, it is likely that consumption remains unequal. This commodity, plus fruits and sea fish, thus presents to persons able to pay high prices the opportunity to improve the inadequate dietaries defined by the legal rations.

Food supplies available to the Dutch population are in fairly close balance with current ration levels. Consumption takes place at a scale of caloric value at least 80 percent of pre-war. It is only the availability of non-rationed foods and the extent of the black market which permit any appreciably increased dietaries to those most able to purchase these foods.

Some improvement may be anticipated from the expansion of Dutch potato acreage. There have been reports that acreage in 1942 was double the pre-war figure, though reported production certainly did not increase proportionately. The situation could improve to some extent if German requisitions were reduced. (The requirements for the German occupation forces are not appreciable). Such diminished requisitions would release foods which would not add greatly to the caloric value of diets but would be particularly

important (protein and fats) for improving the composition of the diets. However, the margin for such increases is disappearing since production of animal products will continue to fall, at least through 1943.

STATISTICAL APPENDIX

Table I

ESTIMATED CONSUMER CATEGORIES
IN THE NETHERLANDS
Average 1942-1943

Normal consumers (urban)[a]:	
Aged 0 - 4	750,000
" 4 - 14	1,415,000
" 14 - 20	1,000,000
" 20 - up	3,235,000
Farm population[b]	1,500,000
Heavy workers[b]	650,000
Very heavy workers[b]	150,000
TOTAL DUTCH CONSUMERS	8,700,000[c]
Foreign soldiers and civilians	50,000[b]
GRAND TOTAL OF CONSUMERS	8,750,000

a Basic age distribution computed from Ministry of Economic Warfare Report, Food Rationing in the Netherlands, 15 February 1943, after adjustments had been made for the farm population. Total number of normal consumers is obtained as a residual by subtracting other categories from 8,700,000 for the Netherlands.

b Estimated by OSS.

c Excludes approximately 300,000 Dutchmen employed in Germany, France, and the East.

Table II

CURRENT LEGAL WEEKLY FOOD RATIONS IN THE NETHERLANDS[a]
(in grams)

Consumer Category[b]	Bread[c]	Sugar	Marmalade, Jam	Fats[d]	Milk[e]	Meat[f]	Cheese	Potatoes[g]	Coffee, Tea Cocoa, etc.[h]
Normal consumer . . .	1,800	250	125	146	1,339	125	75	4,000	60
Heavy worker	2,700	250	125	219	1,339	300	75	6,000	60
Very heavy worker . .	3,600	250	125	438	1,339	500	75	8,000	60
Expectant and nursing mothers .	2,500[i]	250	125	146	2,678	125	75	4,000	60
Children under 4 . .	900	250	125	87	5,407	125	75	2,000	60
Children, 4 - 14 . .	1,800	250	125	175	4,481	125	75	4,000	60
Adolescents 14-20 . .	2,200	250	125	175	1,803	125	75	6,000	60

Source: Average Weekly Food Rations in Enemy and Enemy-occupied Countries, dated 21 June, 1943, Ministry of Economic Warfare.

See footnotes on following page.

NOTES TO TABLE II

a Special Foods:
Rice: 60 grams for children under 4.
Peas and beans, cereal products, alimentary pastes: 150 grams for all consumers.
Chocolate or candy: 67 grams for children under 14.
Fruits, other vegetables, fish: not rationed.
Eggs: normal consumer, one; children and adolescents, 2.
Oatmeal: 60 grams for children under 4.
Cheese: 75 grams for all consumers.

b These categories exclude the farm population, which comprises almost 20 percent of the total population. Rations for self-suppliers vary with the type of food produced. Extra rations (in unknown amounts) are available to relatives of Dutch volunteers serving in the German armed forces or Labor Service. Special ration cards are issued to Germans resident in the Netherlands, though it is claimed that their food allowances are no larger than the Dutch.

c Or cakes or pastries in lieu of bread, plus 70 grams a week of flour for all consumers. Children under 4 may receive biscuits or special children's foods in lieu of bread.

d Butter only. Prices reduced to persons of small means.

e "Standardized" milk (fat content 2.5 percent) for children up to 14, and for expectant and nursing mothers (for 20 weeks before and 6 weeks after childbirth). For adolescents, "standardized" milk, 2,678 grams plus 1,803 skimmed milk; for other consumers, skimmed milk.

f Including bone; or 75 percent as much boneless or processed meat. Meat products available in varying proportions. Night worker, category 1, 175 grams; night worker, category 2, 225 grams.

g 1,000 grams extra to consumers in lowest income group.

h Coffee substitute only. For children up to 14, 37 grams of cocoa preparation (two-thirds sugar, one-third cocoa).

i For 20 weeks before childbirth and 6 weeks afterwards, mothers may have either the extra bread ration shown on the table, or 350 grams of oatmeal and 350 grams of groats per week, or 500 extra grams of bread and 125 extra grams of butter per week.

Table III

LEGAL RATIONS OF IMPORTANT FOODS BY TIME PERIODS
(in grams per week)

Period beginning:	Normal consumer	Heavy worker	Very heavy worker	Children under 4	Children 4 - 14	Adolescents 14 - 20
Bread:						
17 June 1940	2,000	2,000	2,000	2,000	2,000	2,000
1 September 1940 . .	2,000	3,000	4,000	2,000	2,000	2,000
December 1940 . . .	2,000	3,000	4,000	1,000	2,000	2,400
Spring, 1941	2,400	3,600	4,800	1,200	2,400	2,860
September 1941 . . .	1,800	2,700	3,600	900	1,800	2,200
Sugar:						
16 October 1939 . .	250	250	250	250	250	250
April 1941	150	150	150	150	150	150
December 1941 . . .	250	250	250	250	250	250
Fats:						
15 July 1940	250	375	750	125	250	250
21 April 1941 . . .	195	292	585	97	195	195
25 September 1941 .	184	276	552	92	184	210
28 December 1941 . .	195	292	585	97	195	195
26 May 1942	175	262	525	87	175	175
15 July 1942	146	219	438	87	175	175

(continued on following page)

Table III (contd.)

LEGAL RATIONS OF IMPORTANT FOODS BY TIME PERIODS
(In grams per week)

Period beginning:	Normal consumer	Heavy worker	Very heavy worker	Children under 4	Children 4 - 14	Adolescents 14 - 20
Meat:						
16 September 1940 .	500	a	a	250	500	500
1 December 1940 . .	320	480	800	160	320	320
15 April 1941 . . .	220	330	550	110	220	220
14 July 1941 . . .	300	450	750	150	300	300
5 January 1942 . .	250	375	625	125	250	250
19 July 1942 . . .	300	450	750	150	300	300
29 November 1942 .	250	375	625	125	250	250
25 February 1943 .	200	300	500	62	200	200
21 April 1943 . . .	125	300	500	125	125	125
Potatoes:						
May 1941	1,500	2,250	3,000	750	1,500	1,500
October 1941 . . .	3,500	5,250	7,000	1,750	3,500	5,250
3 May 1942	2,500	3,750	5,000	1,250	2,500	3,750
21 June 1942 . . .	1,000	1,500	2,000	500	100	1,500
26 July 1942 . . .	3,000	4,500	6,000	1,500	3,000	4,500
September, 1942 . .	4,000	6,000	8,000	2,000	4,000	6,000

a Larger rations to workers; amount not known.

Source: Ministry of Economic Warfare and Netherlands Economic Mission

Table IV

DAILY CALORIE CONSUMPTION OF MAJOR CONSUMER CATEGORIES

Consumer category	Current consumption[a] (unadjusted)	Current consumption[b] (adjusted)	Nutritional standard
Normal consumer..	2,070	1,949	2,400-3,000
Heavy worker.....	2,890	2,708	3,600
Very heavy worker.....	3,900	3,672	4,800
Expectant and nursing mothers	2,586	2,465	2,800-3,000
Children under 4.	1,996	1,935	1,200
Children 4-14....	2,541	2,420	1,500-2,500
Adolescents 14-20	2,599	2,417	2,500-3,600

a. Based on current legal food rations and estimated consumption of unrationed foods. The latter are assumed to provide about 15 percent of the total caloric intake. 1,000 grams of extra potatoes per week are available to consumers in the lowest income group, raising their daily consumption by 120 calories.

b. Adjusted for unavailability of rations. It is assumed that 75 percent of the potato rations are obtained.

TABLE V

PRE-WAR AVERAGE PER CAPITA WEEKLY FOOD CONSUMPTION[a]

	In grams	In calories
Bread, flour, and cereals, in terms of bread.....	2,700	6,804
Sugar.....	350-400	1,393-1,592
Meat and meat products....	850-900	2,184-2,313
Fish.....	200	200
Fats.....	400-500	2,932-3,665
Cheese.....	130-140	458-493
Milk.....	2,100-2,800	1,449-1,932
Eggs.....	140	221
Potatoes.....	2,000[b]	1,700
Other foods.....		2,800[c]
TOTAL PER WEEK.....		20,141-21,720
TOTAL PER DAY.....		2,877-3,103

a. Based on Foreign Crops and Markets, 9 June 1941, p. 881.

b. USDA estimate.

c. Vegetables and fruits assumed to provide roughly 180 calories per day (USDA estimate).

Table VI

NUTRITIONAL VALUE OF DAILY DIET,[a] 1942-43
(Proteins, Fats, and Carbohydrates)

Consumer category	Proteins	Fats	Carbohydrates
Normal consumer..	59	36	206
Heavy worker.....	86	55	464
Very heavy worker	112	91	590
Expectant-nursing mothers.....	101	64	408
Children under 4.	84	74	271
Children 4-14....	86	61	382
Adolescents 14-20	81	44	441

a. Computed from current legal food rations plus estimated consumption of unrationed and locally rationed foodstuffs. Seventy-five percent of potato rations are assumed to be available.

Table VII

ESTIMATED SUPPLIES OF WHEAT AND RYE IN THE NETHERLANDS
(in thousands of metric tons)

		Average 1935-39 (1)	1940-41 (2)	1941-42 (3)	1942-43 (4)
	Wheat:				
A	Production.	413	370	380	430
B	Net imports	647	0	0	0
C	TOTAL WHEAT	1,060	370	380	430
	Rye:				
D	Production.	516	480	510	530
E	Net imports	25	0	0	0
F	TOTAL RYE..	541	480	510	530
G	GRAND TOTAL	1,601	850	890	960

NOTES

A-1 Computed from International Yearbook of Agricultural Statistics.

-2 USDA, The Food Situation, 1942-43, in Continental Europe, the Soviet Union, and North Africa, 1 Feb. 1943.

-3 Ditto.

-4 Ditto.

B-1 See note to A-1.

D-1 See note to A-1.

-2 See note to A-2.

-3 Ditto.

-4 Ditto.

E-1 See note to A-1.

Table VIII

ESTIMATED SUPPLIES OF POTATOES IN THE NETHERLANDS
(in thousands of metric tons)

	Average 1935-39 (1)	1940-41 (2)	1941-42 (3)	1942-43 (4)
A Production....	2,742	2,300	2,300	3,000
B Net imports...	-310	0	0	-325
C TOTAL POTATOES	2,432	2,300	2,300	2,675

NOTES

A-1 Computed from International Yearbook of Agricultural Statistics, Rome.

-2 USDA, The Food Situation, 1942-43, in Continental Europe, the Soviet Union, and North Africa, 1 Feb. 1943.

B-1 This figure represents net exports. For source, see note to A-1.

Table IX

ESTIMATED PRODUCTION OF MEAT IN THE NETHERLANDS*
(in thousands of metric tons)

	Average pre-war	1940	1941	1942
Beef and veal.....	134[a]	160	150	110
Pork (excluding lard)	175[b]	220	130	60
Mutton.....	10[c]	12	10	8
TOTAL PRODUCTION.....	319	392	290	178

a The Netherlands normally exported approximately 2,000 tons of beef and veal annually.

b The Netherlands normally exported approximately 34,000 tons of pork annually.

c Annual net exports of mutton amounted to 3,000 tons in pre-war years.

*Source: Estimates for pre-war were computed from the International Yearbook of Agricultural Statistics, Rome, and from figures published by the USDA. The estimates for the war years have been made on the basis of intelligence material available in the OSS.

Table X

ESTIMATED PRODUCTION OF FATS IN THE NETHERLANDS*
(in thousands of metric tons)

	Average 1935-39	1940	1941	1942
Butter.....	102[a]	100	100	75
Lard.....	45[b]	60	20	10
Margarine.....	70[c]	50	30	15
TOTAL PRODUCTION	217	210	150	100

a In pre-war years, the Netherlands exported about 55,000 tons of butter annually.

b In pre-war years, the Netherlands exported approximately 7,000 tons of lard annually.

c Exports of margarine were negligible.

*Source: Pre-war figures were computed from data published in the International Yearbook of Agricultural Statistics and by the USDA. The estimates for the war years were made on the basis of material available in the OSS.

Table XI

ESTIMATED PRODUCTION AND UTILIZATION OF MILK
IN THE NETHERLANDS*
(in thousands of metric tons)

	Average 1935-39	1940	1941	1942
TOTAL MILK OUTPUT.....	5,080	4,700	3,900	2,800
Utilization:[a]				
Human consumption (fluid)	1,220	1,100	750	550
Livestock consumption....	210	200	175	150
Butter.....	2,500	2,500	2,500	1,850
Cheese.....	850	700	450	250
Other products.....	300	200	25	b
TOTAL UTILIZATION.....	5,080	4,700	3,900	2,800

a The estimates of utilization represent the distribution of the milk production among various types of uses. They do not represent domestic consumption, since no deduction has been made for exports, which were very large in pre-war years.

b Negligible.

*Source: Pre-war figures were computed from data published in the International Yearbook of Agricultural Statistics and by the USDA. The estimates for the war years were made on the basis of material available in the OSS. These are not very different from those given in MEW's table, Netherlands Milk Utilization , dated 20 October 1942.

SECTION IV

FOOD IN NORWAY

1 July 1943

If and when this study outlives its usefulness to you, kindly return it to:

Office of Strategic Services
Director, Research and Analysis Branch
25th and E Streets, N. W.
Washington, D. C.

(23810)

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CONFIDENTIAL

FOOD IN NORWAY

SUMMARY

1. Current legal food rations and other foods available in Norway provide about two-thirds of the calorie requirements of most of the urban population.

2. Legal rations are not always available in the cities. The farm and fishing population, and those with access to black markets benefit -- illegally -- at the expense of others. Many in these categories continue to have ample diets.

3. The Norwegian food position first became difficult late in 1941. It continued to be so, at least through the spring of this year. An improvement in harvests from the expanded acreages and in the fish catch might make it possible, despite German requisitions, for larger parts of the population to expand consumption.

4. Underconsumption and malnutrition have only begun to leave their mark upon Norway. The situation is, of course, most severe in the cities, and perhaps also in the inaccessible areas of the north.

FOOD IN NORWAY

I. THE FOOD POSITION IN NORWAY

A. Under the Rationing System

Food rationing was undertaken in Norway shortly after the beginning of the war, but it was only subsequent to the German occupation that a comprehensive rationing system was introduced. Gradually, more and more foods were encompassed by this system, so that today practically all foodstuffs are rationed, with the important exceptions of fish and meat. These latter are not readily available, however.

In October 1939, sugar, coffee, and tea -- total supplies of which had always been imported -- were rationed. Bread was subjected to control on 29 April 1940 and butter and edible fats and oils on 1 June 1940. Other main foodstuffs which, on account of the reserves built up before the German invasion, did not suggest marked shortage until well into 1941, were then subjected to local rationing or informal control by retailers. This did not prove satisfactory. Both milk and meat were placed under complete control in December 1941; in September 1942, potatoes were similarly controlled and, a few weeks later, even vegetables were included in the system. Meat supplies could not be provided regularly, even with rationing, so that the system was discontinued except for special workers. Though meat is now unrationed for about four-fifths of the urban population, it is very scarce, particularly since demands by the special workers must be met first. No rationing of fish has been introduced, but supplies of fresh fish are frequently not available to consumers.

Supplementary allotments of foods were always provided for those with special food requirements, i.e., heavy

workers, children, the sick, pregnant women and nursing mothers. However, several modifications were made in the special categories before the adoption (late in 1942) of the subdivisions now effective. These, and our estimates of the number of people in each category, are shown in Table 1.[1] Heavy and very heavy workers comprise some 400,000 persons, about half the nonagricultural employed. The agricultural population includes about 900,000 people. For them, no complete rationing schedule is announced, primarily because it is impossible to enforce a system which demands restricted consumption on the part of those producing foodstuffs. (It is likely, therefore, that food consumption by the agricultural population has not been too strictly curtailed from its pre-war levels). In the table, the categories of farm population and of heavy workers also include those fishermen and lumbermen who receive supplementary food allowances even above those of the rest of the group. Similar special allowances are also available to pregnant women, nursing mothers, and to sick people whose illness is attested by a doctor's certificate.

Provisions for obtaining food at low prices have not been adopted extensively in Norway. A few canteens for workers and soup kitchens for the poor have been started in some cities and in the larger towns. These (particularly workers' canteens in factories) are being encouraged by the authorities, but the development to date seems to be behind that in other countries with adverse food positions. In some measure, this is due to the all-inclusiveness of the rationing system: few non-rationed foods are available.

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1. Numbered tables appear in the appendix. The estimates shown in Table 1 have been prepared in this office. No official information is available.

Practically the whole Norwegian dietary is composed of foods which are distributed in exchange for ration cards or coupons.

While almost all foodstuffs are rationed, the unavailability at different times in different places of nearly every kind of food, and the existence of a substantial black market have meant significant differences between various groups in food intake.

B. The Availability of Rations

There have been several adjustments in the size of rations since rationing was first begun. (See Table 3). In all cases (except when new worker categories were set up) these ration changes meant reductions. Bread rations for the normal consumer were 2,730 grams weekly in April 1940; today they are only two-thirds of that amount. A decline of the same proportion occurred in the butter and fats allocations. Meat was on the ration card during early 1942; its unavailability resulted first in an unofficial, but actual reduction of 50 percent, and then in its removal from the rations by the end of the summer of that year. It is clear that these reductions followed periods when the rationed quantities could not be obtained on the market. This is attested by many reports from Norway.[1] Most of these deal with meat, fats, milk, and potatoes, but all foods are mentioned at one time or another -- even bread.[2] Generally, therefore, diets

---

1. "Only a few housewives could get sugar last rationing period, and only by paying fantastic prices." (newspaper report of 7 Nov. 1942).

"...impossible to maintain ration of 200 grams of meat per person for a four-week period..." (Bern telegram #363).

"Rations of butter and margarine one-fourth of specified quantity. On west coast October fats rations still not delivered." (Bern telegram #890).

2. Shortages are particularly important in the northern provinces, Nordland, Troms, and Finnmark, since they have very poor means of communication with the rest of the country. These areas are markedly deficit for certain foods (especially bread grains, and potatoes).

defined by the legal rations seem to provide an upper limit to consumption for the various consumer categories taken as a whole. Since practically all foodstuffs are rationed in some way, the implications of this conclusion are severe ones. The sole remaining possibility is that the rationing system works so imperfectly that significant quantities are consumed "off the rations", thus mitigating the food position of at least some part of the consumers. To appraise this possibility, some examination must be made of the changing Norwegian supply situation.[1]

The Norwegian economy normally provided less than half the caloric intake of its population. Grain, both for food and fodder, comprised the most important import. Without imported foodstuffs, the livestock economy was deficit. All sugar had to be imported. But Norway exported about 25 percent of her fresh fish (plus significant amounts of various processed fish products); her potato position was also surplus to a small extent. Rough calculations indicate that when total Norwegian foodstuffs production of pre-war years is converted to calories, average calories per person are well above what the current rations permit.[2] Such a calculation does not, of course, present a realistic picture: the corresponding diet would be disproportionately weighted with fish. Moreover, sharp declines have occurred in the output of some products (particularly fish) since the beginning of the war, and from a caloric viewpoint, these are not compensated for by small increases in the production of

---

1. See also the discussion below, The Food Position, 1942-43.

2. Indeed, even after making some allowance for feed and seed, they are close to average nutritional requirements for calories.

potatoes. Nonetheless, there may still exist some basis for believing that the diets which Norwegian agriculture could supply should be above those which appear now to be available.

At the time of the German occupation, reserve stocks, both private and public, were considerable. Sugar and grain reserves were ample for a year's normal consumption, feed concentrates for two or three months.[1] This helps to explain the relatively high initial rations, and the extent to which they were maintained during the first year after the German occupation. These reserves were drained off by the consumption requirements (and to some extent by German requisitions); it is not likely that reserves above minimal distribution essentials were available after the crop year 1941-42.[2]

German troops -- as well as German and other civilians -- now stationed in Norway constitute an important burden upon Norwegian foodstuffs. It is not absolutely certain to what extent food for these is provided from (or via) Germany. German exports to Norway, as announced by the Germans, always present an exaggerated picture of the gain to Norwegians; these reports must be discounted at least by the amounts required for feeding these troops and civilians.[3]

---

1. See Karl Evang, Norway's Food in Peace and War, Washington, 1942. Evang also adds that "there were very few homes, restaurants, hotels, hospitals, and other institutions where food is served that had not, in one way or another, made their own preparations against a coming shortage. During the two months of war in Norway, there was also a tendency to decentralize stocks in order to avoid any great German looting in one place." (p. 19).

2. Thus a report of fall, 1942, states: "Rationed foodstuffs are very scarce, chiefly owing to lack of reserves, as every temporary dislocation in the flow of supplies is immediately reflected in the consumer market." (Stockholm telegram A-39).

3. For the purposes of this report, the number of Germans and other foreigners (both troops and civilians) now in Norway is estimated at 250,000. (See Table 1). Unless otherwise indicated, Norwegian requirements in this report include food for these people, computed at the ration levels of very heavy workers.

There can be no doubt that the requirements of these occupation forces impose a real hardship upon the Norwegians with respect to all these products. The high level of consumption presumably maintained by the troops means that, in meats, fats, and milk, a sizeable percentage of total supplies is so utilized. Even if farmers retained only enough for their families, present supply levels would barely cover total requirements. It is probable that farmer retentions for their own use are above the most liberal rations; the observed shortages are therefore more understandable.

For fish (and to a less extent potatoes) the situation is somewhat different. The supply level and the extent of German takings still leave a residual which should improve the consumption picture portrayed above. The reported unavailability of these foodstuffs indicates large consumption by the farm and fishing families, and the possibilities of a significant amount of black market operations. How many persons benefit through this latter channel cannot be estimated, but there are many reports of such activity in Norway.

C. Nutrition and Health of the Population

Quantities of basic foodstuffs currently indicated as rations are shown, by consumer category, in Table 2. Other foodstuffs are indicated as "special foods" in footnote (a) of that table. Assuming that rations are available, caloric intake by the various consumers can be calculated. Caloric intake was also calculated in terms of actual consumption, the availability of rations being estimated in light of the present supply picture.

If it is assumed that basic rationed foodstuffs are available, they provide normal consumers with about 1,475

calories per day.[1] To these the amounts of vegetables, cheese, peas, beans, honey, syrup, etc., (the "special foods") believed to be distributed, and the quantity of fish estimated to be consumed add an additional 260 calories daily. Thus some 1,735 calories are theoretically available, about 72 percent of the minimal nutritional standard. If unavailability of rations is taken into account, basic rationed foodstuffs provide normal consumers with about 1,350 calories per day. Together with unrationed foodstuffs, these supply about 66 percent of the minimal nutritional standard. Similar calculations for the worker categories also indicate caloric intakes which are considerably below what is considered nutritionally desirable. (See Table 5).

Children are considered as normal consumers for most rationed commodities with the notable exceptions of bread, milk, chocolate and fish oils. Caloric intake by children under six years of age appears, on the basis of rations, to exceed requirements. But the large potato ration is actually consumed, in significant measure, by the rest of the family -- as is also the case for many other foods. Calories on the basis of rationed and special foods should, therefore, be considered only adequate. The allocations of milk (3/4 liters daily), of vitamin-rich oils, and of chocolate are much more relevant for these groups, but consumption of the foods necessary for the development of children is still below requirements. The same is true for older children (6 - 15 years of age) for whom the rations and special foods fail even to provide the number of necessary calories. The extra foods (notable milk) allocated to

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1. This calculation was made on the assumption that meat actually was obtained by normal consumers, to the amount of 10 grams daily. See Table 4.

expectant and nursing mothers also fail to bring their diets near what is necessary to provide for them and their infants.

It can be concluded, therefore, that actual consumption fails to provide an adequate nutritional basis for Norwegian urban consumers of all categories. The nutritional value of the actual daily dietary of the various consumer groups with respect to proteins, fats and carbohydrates is shown in Table 6. Most striking is the desperate lack of fats in the dietary of all groups. All consumers, with the exception of children under 5, secure only a minimum of protein. Together with the caloric deficiency of the diet, these deficits should increase the damages to health which are beginning to show among the Norwegian population.

Under these circumstances, reports of extreme consequences from malnutrition and underconsumption are not yet to be expected. Instead, the first signs of these consequences are pointed out; there are many prophecies of what is to come. The following are excerpts from some of these reports:

> "Cases of beri-beri indicate Vitamin B content of diet inadequate... Vitamin C situation also precarious. If turnip supplies are inadequate scurvy will probably become general since potatoes have low Vitamin C content at this time of year... Adult diet contains hardly any Vitamin D." (Stockholm telegram A-93, 19 February 1943.)

> "...the prevalence of scurvy in Norway, particularly in the north, and also cases of pellagra and other illnesses due to lack of vitamins. The number of death notices is strikingly large and remarkable number of cases where the deaths are sudden. Conditions are such that people succumb to illnesses which they would ordinarily survive." (Stockholm telegram #1354, 30 May 1942.)

> "All reports indicate large portion of urban population unlikely to survive winter without permanent injury. Deficiency diseases will ravage country, affecting children and youths in particular." (Stockholm telegram A-17, 2 October 1942).

> "Diseases from undernourishment increasing considerably." (Bern telegram, #4691, 10 October 1942).

"Fat and vitamin deficiencies are increasing public susceptibility to many diseases. Exhaustion and decline in labor capacity are generally observed. Increase in jaundice and many serious cases of diphtheria and measles partly due to dificiency of vitamin C. Some districts..nearly 25 percent of population has jaundice." (OSS #205270, 31 August 1942).

"Norwegian physicians contradict Quisling medical director's optimistic report on health of people by saying their physical and spiritual resistance lowered owing to malnutrition. Frequently people absent from work owing to undernourishment and lack of flour and potatoes." (Stockholm telegram A-47, 28 October 1942).

"Epidemic diseases increasing; average weight Norwegians decreased 10 to 20 percent." (Bern telegram #363, 16 January 1943).

"Lack of fat has resulted in skin diseases. Tuberculosis increasing despite increased medical care." (Stockholm telegram A-167, 31 March 1943).

"Cases of illness 55,000 in January, 1943 compared with 33,000 in January 1942." (Bern telegram No. 2426, 17 April 1943).

II. FOOD BALANCES, 1942-43

Some indication can be given of the relationship between probable requirements and probable supplies of important foodstuffs during the crop year ending July 1, 1943. They permit a quantitative expression of some of the factors in the earlier discussion on the availability of the rations. All food requirements have been computed on the basis of current legal rations and our estimates of the number of people in various consumer categories.

The balances indicated must be interpreted with care. In the first place, the legal rations are fixed on the basis of expected or perhaps "hoped for" supplies. They are substantially below consumer requirements from either a psychological or physiological point of view.[1]

Secondly, even if requirements as defined and supplies do balance, it is still very probable that the rations are not available to considerable numbers of the population at various periods. The scope of operations of both the "black" and the "white" markets are quite substantial, despite strict Nazi surveillance of producers, and severe penalties assessed against illegal operators. If supplies are just sufficient to meet ration requirements, and if some people get more than are called for by the legal rations as a result of these illicit operations, then there must be a corresponding deficiency suffered by other groups.

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1. See Tables 4 and 6.

A. Breadgrains (wheat and rye):[1]

1. Minimum Requirements, (metric tons).

Rations:	
Norwegians	175,000[2]
Foreigners	25,000[2]
Seed	7,000[3]
Waste and unmillable grain	9,000[4]
Total	216,000

2. Supplies, (metric tons).

Production	82,000[5]
Imports	100,000[5]
Total	182,000

3. Balance of Requirements and Supplies. The deficit shown is a significant one and suggests that serious supply difficulties existed before the end of the crop year. However, some modification may be introduced. The import figures may be low, particularly when compared with German claims that shipments will be 160,000 tons. Larger imports might well eliminate the deficit. The calculations assumed that the farm population received the same ration as did very heavy workers (3,400 grams per person per week). This is believed not to be excessive, especially since no allowance is made for animal feeding of these two grains -- a

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1. Actually, bread is now made of wheat, rye, barley, oats, pea and potato flour (plus some peat flour and cellulose in some areas). The figures have been adjusted for these. See footnote 2 below.

2. Requirements (for both categories) in terms of bread are estimated at 410,000 metric tons. The combined figure of 200,000 tons was obtained after correction for the quantity of flour entering into the bread, the admixtures of other flours (40 percent of total flour) and an extraction rate from grain which ranged from 90 to 95 percent for the different kinds of grain.

3. Seed applied at 2 bushels per acre.

4. Seed and waste estimated at 20 percent of production.

5. See Table 7.

factor which may be important inasmuch as breadgrain utilization will also cut into the barley and oats needed for livestock feeding.

Even if the breadgrain deficit is made up, however, the situation will be a very tight one. In any event, considerable difficulty will be experienced by some consumers in obtaining their rations.

B. Potatoes

1. Minimum Requirements, (metric tons).

Rations:	
Norwegians	460,000
Foreigners	65,000
Potato flour	35,000[1]
Seed and waste	200,000[2]
Total	760,000

2. Supplies, (metric tons).

Production	1,000,000[3]

3. Balance of Requirements and Supplies. In the balance, no allowance has been made for animal feeding of potatoes. This is legally forbidden. However, more than 300,000 tons used to be fed annually to livestock; it is not likely that this can be completely eliminated -- especially in view, again, of severe incursions into the foodstuffs position on other scores. Moreover, though requirements for the soldiers and foreign civilians in Norway may amount to only 65,000 tons, Germany has requisitioned 150,000 tons. Together with the quantities illicitly fed to livestock, this should virtually have eliminated the "surplus" indicated above. The potato crop is believed to have been in excess of that of the 1941-42 season (see Table 8). Previous widespread inability to obtain

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1. Used for admixture in bread, and also as direct ration.
2. Estimated, conservatively, at 20 percent of total crop.
3. See Table 8.

rations should not have been so extensive in 1942-43; rather, at least some urban consumers undoubtedly raised their food intake as a result of the availability of potatoes.

C. Meats

1. Minimum Requirements, (metric tons).

Rations:	
Norwegians	33,000[1]
Foreigners	12,000[1]
Total	45,000

2. Supplies, (metric tons).

Production	46,000[2]

3. Balance of Requirements and Supplies. This balance indicates that, after the demands of special consumer categories have been filled, including about 4,000 tons for foreign civilians, and 8,000 tons for the occupation forces, very little meat should be available for normal consumers. Farm slaughterings are most difficult to control and demands for meat in the black market are very great. Furthermore, in past years, when supplies were considerably higher, equitable distribution at a low level was not accomplished. Meat will be available to few consumers (even the farm population) at adequate levels. Rather, there will continue to be difficulties in obtaining the inadequate rations for special workers, while most normal consumers will get very small quantities of meat, if any at all.

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1. Ration requirements amount to 35,970 metric tons at retail. This is taken to be equivalent to 45,000 tons shipped from the slaughter house. It should also be added that the ration figure includes a small allowance (50 grams weekly) for normal consumers. This amount was also included in the dietary discussed above. See Table 4.

2. See Table 9. The estimate was actually made for 1942 but is taken for the 1942-43 crop year. The actual figure for that period may turn out to be smaller.

D. Fats and Oils

1. Minimum Requirements, (metric tons).

Rations:	
Norwegians	38,100
Foreigners	4,100
Total	42,200

2. Supplies, (metric tons).

Production	28,000[1]

3. Balance of Requirements and Supplies. The deficit here is the largest and most significant one in the Norwegian dietary. Germany may provide the 4,000 or 5,000 tons required to supply the occupation personnel, but that significant imports from that source will materialize is unlikely in view of the German position in these foodstuffs. The Norwegian dietary in some areas may receive recompense from the consumption of fat fish, such as herring and mackerel. For such fats as butter, lard, and margarine, however, the situation cannot but continue grave. Fats rations will not be available.

E. Whole Milk

1. Minimum Requirements, (metric tons).

Rations:	
Norwegians	415,000[2]
Foreigners	35,000[3]
Total	450,000

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1. See Table 10. The figure is an estimate for 1942 but can be used for the crop year 1942-43.

2. Germany claims to be sending 6,000 tons of fats. Stockholm cable #2357, September 1942. Neue Zurcher Zeitung, 8 December 1942, reports that Germany sent enough to meet ration needs for 1 month, i.e., 3-4,000 tons.

3. As shown in Table 2, this figure is based upon the expectation that only children, pregnant women and nursing mothers, lumbermen and fishermen away from home, the farm population, and the occupation forces consume whole milk. These latter groups are assumed to have 3/4 liters per day. Their requirements, particularly those of the farm population, comprise the vast bulk of the total.

(23810)

2. Supplies, (metric tons).

Production. . . . . 350,000[1]

3. Balance of Requirements and Supplies. The main factors in this lack of balance are the large requirements for the foreigners and for the farm population. The former will probably be fulfilled; there is some indication that farmers are not able to retain so large an amount per person (the full amount is still below pre-war consumption levels). It will be through reductions in this consumption that some balance may be achieved. The milk production figure (as indicated in Table 10) is really an estimate of the amount available for human consumption. But the low estimates of whole milk for animal feeding, and of milk for butter and cheese will not permit a larger percentage of total production to go into milk for human consumption. Milk will therefore continue to be difficult to obtain in Norway; with the possible exception of some of the farm population (and of the occupying authorities) the milk position will not present an opportunity of improving the inadequate diets of the population.

F. Fish.

It is not possible to present even an approximate balance sheet for fish in Norway. The various impediments to fishing have resulted, it is believed, in a reduction of the 1942 catch to a level about half that of pre-war. German requisitions (including fish for the occupying troops) have taken half that amount, leaving some 250,000 tons of fresh fish for the Norwegian population. This figure is more than

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1. See Table 10. This estimate is for 1942 and is lower than those usually presented. It is believed that other estimates fail to account adequately for both the decline in milk cow numbers and the reduced output per cow (consequent upon the reduction in quality and quantity of fodder). The 1942 figure is used for the 1942-43 crop year.

twice the pre-war human consumption of fish in Norway. However, the largest part of the pre-war catch was processed -- primarily into commodities not directly consumed. With the feed economy so badly off, fish feed is now especially important; Norwegian margarine production also is heavily dependent upon the output of herring oil. Hence, uses other than for direct consumption cannot be completely curtailed. With fish catches at about the 1942 level, it is not likely, therefore, that consumption much above that of pre-war can take place. The diets discussed above (and summarized in Table 3) assumed current consumption of fish of 600 grams per person weekly. This is about 800 to 900 grams of fresh fish, or about 45 kilos per person on an annual basis, which is already above pre-war consumption levels. It is not likely that equitable distribution takes place; hence the situation is certainly much better for the fisherman's family than for others. But real dietary gains from Norway's fish economy are dependent at least upon the expansion of the size of the catch above 1942 quantities. German takings cannot be expected to decline.

Norwegian supplies do not now offer any significant possibilities for consumption -- by large groups -- in supplement to the rationed and special foods indicated in Tables 2 and 3. This situation did not improve during the crop year 1942-43. However, basic to this situation is the very low level of current output, both in agriculture and in fishing. The 1942 fruit harvest was disastrous, estimated at one-third of the 1941 harvest.[1] Despite sharply expanded acreages, it was necessary to cease vegetable distributions

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1. Stockholm Legation, Agricultural Conditions, Food Situation and Black Market Activities in Norway, 3 September 1942. (23810)

after Christmas until the early vegetables came to market.[1] Such deficiencies have disastrous effects on the vitamin content of the dietary.

Considerable improvement in the food position may be possible as a result of a potato production of 200,000 or 300,000 tons above the pre-war level,[2] and of a fish catch closer to earlier output. These would, in turn, give some assistance to the livestock economy (though production of meat and dairy products under present wartime conditions cannot be restored to earlier levels).

With such increases (which are likely), the Norwegian food position can be expected to improve -- for the entire population if equitable distribution is maintained, but for important parts of it under any circumstances. This is true despite the fact that German demands, both for the occupation forces and export, will continue to be a serious encumbrance. Norway may thus be spared the severe difficulties encountered in other occupied countries; but underconsumption and malnutrition of an extent warranting care and attention will still exist.

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1. Neue Zürcher Zeitung, 8 December 1942.

2. Such a production (1,200,000 metric tons) has actually been reported; it is in keeping with expanded acreages. It has not yet been attained, however.

(23810)

Statistical Appendix

Table I

ESTIMATED CONSUMER CATEGORIES IN NORWAY,*
1942 AND 1943

Normal consumers (urban)[a]:	
Aged 0 - 1	70,000
" 2 - 5	125,000
" 6 - 15	375,000
" 16 - 18	90,000
" 19 - up	940,000
Farm population[b]	900,000
Heavy workers[c]	240,000
Very heavy workers[c] (Category 1)	85,000
Very heavy workers[c] (Category 2)	75,000
TOTAL NORWEGIAN CONSUMERS[d]	2,900,000
Foreign soldiers and workers[e]	250,000
GRAND TOTAL OF CONSUMERS	3,150,000

*This table must be considered a first approximation, perhaps a rough one. Since it is impossible to estimate ration requirements without such a breakdown, it was held desirable to set out some such estimates. Further estimates will certainly introduce refinements.

See footnotes on following page

NOTES TO TABLE I

a Age distribution is estimated for current years on the basis of the census for 1930. Total number of normal consumers is obtained as residual by subtracting other categories from 2,900,000 total for Norway.

b Taken at 31 percent of total population. (See, for example, Norway's Food in Peace and War, by Karl Evang, Surgeon-General of Norwegian Public Health Service, p. 74.) This number includes forestry workers, 25,000 of whom are assumed to be receiving special lumberman rations.

c The total of these three categories is one-half the number of non-agricultural employed, with the addition of 25,000 fishermen, estimated as those receiving special supplemental rations. The extra heavy workers are principally in the mining, metals, chemicals, and building industries.

d This total excludes, of course, Norwegians not living in Norway.

e Rough estimates, including about 150,000 soldiers and about 100,000 German (and other) civilians.

Table II

CURRENT LEGAL WEEKLY FOOD RATIONS IN NORWAY[a]
(in grams per week)

Consumer category[b]	Bread[c]	Sugar	Fats[d]	Milk[e]	Meat	Potatoes
Normal consumer. .	1,820	200	210	1,802	[f]	3,000
Heavy worker . . .	2,500	200	245	1,802	300	3,750
Very heavy worker (Category 1)	2,950	200	280	1,802	300	4,500
Very heavy worker[g] (Category 2)	3,400	200	315	1,802	300	5,250
Expectant and nursing mothers	1,820	200	210	5,407	[f]	3,000
Children under 2 .	910	200	210	5,407	[f]	3,000
Children 2 - 5 . .	1,140	200	210	5,407	[f]	3,000
Children 6 - 15. .	1,820	200	210	3,605	[f]	3,000
Adolescents 16-18.	2,050[h]	200	210	1,802	[f]	3,000

Source: Food Rationing in Norway, dated 8 March 1943, or Norwegian and Swedish newspaper reports transmitted by cable, whichever provided the most recent information.

See footnotes on following page.

NOTES TO TABLE II

a Special Foods:
Dried peas, beans: 40 grams per week.
Potato flour: special distributions (totalling 1,000 grams in 1942.)
Syrup: 70 grams per week.
Honey: special distributions (during 1942, totalling 400 grams for consumers in South Norway and 1,700 grams for those in North Norway).
Cheese: 30 grams a week.
Eggs: available only on doctors' orders.
Fresh fish: locally rationed but reported scarce.
Canned fish, salt fish: occasional distributions. Sardines, one-half tin per week.
Vegetables: 500 grams per week, theoretically. Three distributions actually made during winter of 1942-43, no others expected before summer.
Chocolate: In 1942, distributions totalling 200 grams for urban consumers, 180 grams for other consumers, 25 grams a week for children 2 - 14.
Coffee substitute: small irregular distributions.

b Rations for self-suppliers, who represent about 30 percent of the population, have not been included in the table. Farmers' food allowances were considerably cut in 1942, but nowhere reached the low level of the normal urban consumer's rations, and probably continued to equal or exceed the worker's. Certain classes of invalids are entitled to extra quantities of milk, eggs, meat, vegetables, etc.

c Soft bread, with alternatives of 1,120 grams of hard bread or 1,400 grams of flour for normal consumer (alternatives for other consumers in proportion to their soft bread rations). Finely milled wheat flour reserved for children under 2.. Dried peas, beans, and rice occasionally available on bread card.

d Butter, margarine or edible oil. Priority to steady customers.

e Whole milk for children under 16, expectant and nursing mothers, and adolescents 16 - 18. Skimmed milk for consumers other than privileged classes, and for adolescents 16 - 18 in the same amount as their allowance of whole milk.

f Locally rationed according to supplies (if any) available after workers' rations are filled.

g Special supplements:

	Lumbermen away from home	Fishermen while at sea
Bread. . . .	3,185	.....
Flour . . .	.....	2,450
Milk	7,210	.....
Meat	1,000	550
Margarine. .	.....	315
Peas	.....	150
Coffee . . .	.....	40

Plus occasional distributions of condensed milk, dried fruit, dried fish, cocoa, syrup, etc.

h Available to all male adolescents between 12 and 20.
(23810)

Table III

LEGAL RATIONS OF IMPORTANT FOODS BY TIME PERIODS
(in grams per week)

Period beginning:	Normal consumer	Light worker	Heavy worker	Very heavy worker Category 1	Very heavy worker Category 2
Bread:					
April 1940	2,730	2,730	2,730	2,730	2,730
October 1940	2,275	2,275	2,275	2,275	2,275
December 1940	2,080	2,535	2,990	3,445	3,900
March 1941	1,820	2,275	2,730	3,185	3,640
Autumn 1942	1,820	1,820	2,500	2,950	3,400
Sugar:					
October 1939	250	250	250	250	250
October 1940	200	200	200	200	200
Fats:					
June 1940	315	315	315	315	315
April 1941	280	280	280	560	560
December 1941	210	210	245	280	315
Meat:					
December 1941	100	100	100	100	100
Summer 1942	Local	Local	300	300	300
Potatoes:					
September 1942	3,000	3,000	3,750	4,500	5,250

Source: MEW, Food Rationing in Norway, 8 March 1943.

Table IV

DAILY CALORIE CONSUMPTION OF MAJOR CONSUMER CATEGORIES

Consumer category	Current[a] consumption (unadjusted)	Current[b] consumption (adjusted)	Nutritional standard
Normal consumer. . .	1,734	1,590	2,400-3,000
Heavy workers. . . .	2,189	1,999	3,150
Very heavy worker. . (Category 1)	2,475	2,257	3,600
Very heavy worker. . (Category 2)	2,750	2,502	4,800
Expectant and nursing mothers. .	2,088	1,873	2,800-3,000
Children under 2 . .	1,789	1,589	1,200
Children 2 - 5 . . .	1,885	1,677	1,500
Children 6 - 15. . .	1,931	1,751	2,100-3,000
Adolescents 16-18. .	1,829	1,761	2,500-3,600

a Based on current legal food rations and estimated consumption of unrationed foods.

b Legal food rations corrected for unavailability of supplies.

Table V

AVERAGE WEEKLY FOOD CONSUMPTION
BY ADULT MALE WORKER IN OSLO
1936-37

	In grams[a]	In calories[b]
Bread, flour, and cereals, in terms of bread	2,584	6,098
Sugar	437	1,739
Fats	570	4,178
Cheese	210	561
Milk	4,520[c]	3,278
Meat	988	2,539
Potatoes	1,850	1,598
Other foods		4,228
TOTAL PER WEEK		24,219
TOTAL PER DAY		3,460

a Based on Norway's Food in Peace and War, by Karl Evang, Surgeon-General of Norwegian Public Health Service, 1942.

b Computed on basis of food weights shown and upon "other foods", which provide 17 percent of total calories.

c Includes whole, skimmed, and canned milk, and cream.

Table VI

NUTRITIONAL VALUE OF DAILY DIET
(Proteins, Fats, and Carbohydrates)

Consumer category	Proteins (grams) (1)	Required proteins (2)	Fats (grams) (3)	Required fats (4)	Carbohydrates (grams) (5)	Required carbohydrates (6)
Normal consumer. . .	49	50-100	41	75-100	247	up to 500
Heavy worker	64	50-100	52	75-100	307	up to 500
Very heavy worker. . (Category 1)	70	50-100	57	75-100	355	up to 500
Very heavy worker. . (Category 2)	77	50-100	62	75-100	403	up to 500
Expectant and nursing mothers	67	50-100	61	75-100	273	up to 500
Children, 0 - 2. . .	58	30	60	75-100	218	up to 500
Children, 2 - 5. . .	60	30-50	61	75-100	232	up to 500
Children, 6 - 15 . .	58	50-85	42	75-100	260	up to 500
Children, 16-18. . .	51	85-100	42	75-100	261	up to 500

Columns 1-3-5 Estimates based on rationed and unrationed food, taking into account unavailability of food as determined by present supply picture.

Columns 2-4-6 Requirements adapted from National Research Council, "Recommended Dietary Allowances," Reprint and Circular Series, No. 115, January 1943.

Table VII

ESTIMATED SUPPLIES OF WHEAT AND RYE IN NORWAY
(in thousands of metric tons)

		1935-39 average	1940-41	1941-42	1942-43
		(1)	(2)	(3)	(4)
	Wheat:				
A	Production.	65	69	80	75
B	Net imports	234	45	35	30
C	TOTAL WHEAT	299	114	115	105
	Rye:				
D	Production.	10	6	8	7
E	Net imports	134	90	75	70
F	TOTAL RYE..	144	96	83	77
G	GRAND TOTAL	443	210	198	182

See footnotes on following page

NOTES TO TABLE VII

A-1 International Yearbook of Agricultural Statistics, Rome.
-2 Ditto.
-3 USDA, The Food Situation, 1942-43, in Continental Europe, the Soviet Union, and North Africa, 1 February 1943.
-4 Ditto.
B-1 See note to A-1.
-2 Estimate made on the basis of intelligence material available in the OSS. Also see Stockholm telegram, 8 July 1942, #1743, and Neue Zurcher Zeitung, 5 June 1941.
-3 Estimate made on the basis of intelligence material available in the OSS.
-4 Provisional estimate.
D-1 See note to A-1.
-2 Ditto.
-3 See note to A-3.
-4 Ditto.
E-1 See note to A-1.
-2 See note to B-2.
-3 See note to B-3.
-4 Ditto. This is a provisional estimate.
C-2 An effort was made to distinguish between imports
-3 of wheat and imports of rye. In some cases, the
-4 data did not lend themselves to such separation and the division had to be made in a rather arbitrary manner. The totals of supplies of both wheat and rye are therefore more nearly accurate than the individual estimates of supplies of wheat and rye.

Table VIII

ESTIMATED SUPPLIES OF POTATOES IN NORWAY
(in thousands of metric tons)

	1935-39 average (1)	1940-41 (2)	1941-42 (3)	1942-43 (4)
A Production. . . .	893	1,000	900	1,000
B Net imports . . .	*	0	0	0
C TOTAL SUPPLIES	893	1,000	900	1,000

* Slight net exporter

NOTES TO TABLE 8

A-1 International Yearbook of Agricultural Statistics, Rome.
-2 Based on information obtained confidentially from sources familiar with the Norwegian agricultural situation. This estimate differs from that of 1,300,000 tons, which is given in the International Yearbook of Agricultural Statistics.
-3 Stockholm telegram, #1271, 22 May 1942.
-4 Estimate made on the basis of material in this office. See particularly Stockholm telegram, A-78, 20 November 1942.

Table IX

ESTIMATED SUPPLIES OF MEAT IN NORWAY*
(in thousands of metric tons)

		Average pre-war (1)	1940 (2)	1941 (3)	1942 (4)
	Beef and veal:				
A	Production	46	60	53	23
B	Net imports	**	0	0	0
C	TOTAL	46	60	53	23
	Pork (excluding lard):				
D	Production	35	26	17	10
E	Net imports	**	0	0	0
F	TOTAL	35	26	17	10
	Mutton and goat meat:				
G	Production	15	14	13	11
H	Net imports	1	0	0	0
I	TOTAL	16	14	13	11
	Horsemeat and reindeer:				
J	Production	3	2	2	1
K	Net imports	**	0	0	0
L	TOTAL	3	2	2	1
	Poultry:				
M	Production	4	4	2	1
N	Net imports	**	0	0	0
O	TOTAL	4	4	2	1
P	GRAND TOTAL	104	106	87	46

* No deductions have been made for requisitions of meat and livestock by the Germans. The estimates of supplies thus include both the supplies made available for Norwegian domestic consumption and the supplies taken over by the Wehrmacht for its own consumption and for export to Germany.

** Negligible.

See footnotes on following page

NOTES TO TABLE IX

A-1 through P-1
Data obtained from official Norwegian statistics.

A-2 through P-2
Estimates made on the basis of intelligence material available to the OSS.

A-3 through P-3
Ditto.

A-4 through P-4
Ditto.

Table X

ESTIMATED SUPPLIES OF FATS IN NORWAY
(in thousands of metric tons)

		Average pre-war (1)	1940 (2)	1941 (3)	1942 (4)
	Butter:				
A	Production.	26	21	12	10
B	Net imports	*	0	0	2
C	TOTAL	26	21	12	12
	Lard:				
D	Production.	5	4	3	2
E	Net imports	**	**	**	**
F	TOTAL DOMESTIC SUPPLY	5	4	3	2
	Margarine:***				
G	Production.	65	30	18	14
H	Net imports	**	**	**	**
I	TOTAL DOMESTIC SUPPLY	65	30	18	14
J	GRAND TOTAL OF SUPPLIES OF FATS	96	55	33	28

* In the pre-war period, Norway was a very small net exporter of butter.
** Negligible, if any.
***Made mainly from herring oil, in 1942 substantial whale oil content.

NOTES TO TABLE 10

A Based on information obtained confidentially from source familiar with the Norwegian agricultural situation.
B Imported from Denmark in 1942.
D Computed on the basis of 15 percent of pork production.
G Rough estimates made on the basis of intelligence material available in the OSS.

Table XI

ESTIMATED SUPPLIES OF DAIRY PRODUCTS IN NORWAY*
(in thousands of metric tons)

		1939 (1)	1940 (2)	1941 (3)	1942 (4)
A	TOTAL MILK OUTPUT	1,500	1,300	900	700
	Utilization:				
B	Livestock.	150	125	75	50
C	Human.	550	525	450	350
D	Butter	680	570	325	275
E	Cheese	90	70	50	25
F	Other products	30	10	**	**
G	TOTAL UTILIZATION	1,500	1,300	900	700

* Based on information obtained confidentially from sources familiar with the Norwegian agricultural situation.
** Negligible.

CONFIDENTIAL

Preliminary

097.3
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876/44

OFFICE OF STRATEGIC SERVICES
Research and Analysis Branch

R & A No. 876

Supplement

FOOD IN OCCUPIED COUNTRIES

Supplement to earlier study, bringing various estimates up to date. Preliminary estimates of urban food intake as of November 1943 and of the foreign trade of these countries in 1943 are presented.

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12 January 1944

CONFIDENTIAL

Preliminary

GENERAL

The food position in Axis Europe was definitely improved in the latter half of 1943. With the lone exceptions of the potato crop in central Europe and the grain harvest in old Hungary, 1943 crop reports indicated production increases everywhere. Rations of basic foodstuffs were generally increased, milling ratios declined, and the admixture of inferior flours in bread were reduced. Even livestock numbers exhibited a tendency to remain stable and in some cases to increase. Furthermore, the successful expansion of oilseed acerage in northwestern Europe should improve the fats position--the most significant nutritive deficiency in the Nazi Europe food economy. Still another indication of the improved food position (although also attributable to increased resistance to German control on the part of her allies) is the tendency of deficit countries to arrange for food imports directly with the surplus countries instead of Germany acting as the middleman.

Although this does not mean that European food consumption is adequate or even up to pre-war standards, it does indicate a significant improvement over the extreme conditions of the 1941-42 winter. Significantly increased grain surpluses in southeastern Europe mean that Germany should be able to assure minimal food requirements to

occupied countries. If pressure for foodstuffs for these countries is reduced, it would enable Germany more readily to compensate for losses of Army food stockpiles as her forces retreat, and to increase domestic stockpiles against the day of a German defeat and consequent loss of access to the surplus food supplies of dominated areas.

A. Belgium

The Belgium diet is the most significantly improved one in Western Europe. This is particularly relevant since it was and still is the most seriously deficient country. The estimated nutritive content of the daily diet of the average Belgian urban consumer in November 1943 was 1720 calories, 55 grams of protein, 35 grams of fats, and 240 grams of carbohydrates. As compared with the average intake in the 1942-43 crop year, it represents an increase of 125 calories, 5 grams of protein, and 5 grams of fats per day. The increases are essentially due to the rise in both the bread and fats ration.

Belgium imported 75,000 MT of grain in the summer of 1943 and was negotiating with Rumania for an additional 100,000 MT at the end of November. She was able to import 170,000 MT of potato seed in the crop year 1942-43 and has agreements for 1943-44 calling for imports of 180,000 MT from Germany, Holland, and Denmark. She also imported 80,000 MT of wine from France in 1943 and reported imports of 40,000 MT of peas from Rumania.

Exports were meagre. Some 5,000 MT of butter, another 5,000 MT of sugar, and a reported 6,000 MT of meat and 3,000 MT of fish in January constitute the total exports reported. German troops in Belgium doubtlessly obtain a good share of their food consumption from the country.

Even minimum adequate standards of food consumption in Belgium must rely on imports and these the Germans have

been unable or unwilling to make in sufficient quantity. With significantly increased production in 1943 and increased availability of basic foodstuffs in German Europe, improved Belgian nutrition in the current year should be maintained.

B. France

The dietary of the average French urban consumer in November 1943 provided a daily diet of 1895 calories, 60 grams of protein, 35 grams of fat, and 350 grams of carbohydrates. This represents an increase of 25 calories per day in caloric intake, and a slight decline in available fats and protein over the average position in the 1942-43 crop year. This is somewhat below the agreed Allied relief lend of 2,000 calories per day, but nevertheless represents a relatively stable situation which has persisted for about a year and a half. French food distribution is particularly inequitable because of the very large black market, and very serious food deficiencies are doubtlessly current among a significant portion of the urban population.

German requisitions from France have not abated; 300,000 MT of breadgrains and 30,000 MT of fats were demanded for delivery by the end of October. In February 1943, only 473,000 MT of grain had been delivered from the previous year's crop, indicating that requisitions in excess of 600,000 MT will continue despite the loss of imports from North Africa The fats figure compares with some 10,000 to 12,000 MT of butter variously estimated to have been requisitioned in 1942. It probably represents a German demand for the total stockpile

remaining from former oilseeds imports from North Africa. Other deliveries of foodstuffs to the Germans in 1943 are variously estimated at 200,000 to 260,000 MT of meat, 600,000 to 700,000 MT of other cereals, 250,000 to 280,000 MT of potatoes, 10,000 to 11,000 MT of cheese, 75,000 to 120,000 MT of vegetables, 30,000 to 50,000 MT of fruit, and 250,000 to 400,000 MT of wine. The French National Committee also reports 1943 deliveries to the Germans of 110,000 MT of sugar, 18,900 MT of jam, 4,900 MT of canned fish, 1,300 MT of dried milk, 43,000 hectoliters of fresh milk, 31,400 hectoliters of skim milk, 500,000 hectoliters of beer, and 32,800,000 eggs.

Substantial amelioration of the French nutritive position could be effected by the elimination of German requisitions. The complete cessation of annual exports to Germany would add between 350 and 450 calories per day if distributed equally among the French urban population.

C. Netherlands

The Dutch food position is among the best in Axis-occupied Europe. The estimated nutritive value of the daily diet of the average Dutch urban consumer in November 1943 was 2180 calories, 70 grams of protein, 50 grams of fats, and 370 grams of carbohydrates. This is significantly below pre-war consumption levels, but above the minimum levels to which Allied authorities have undertaken to raise the dietary levels of Axis Europe upon reoccupation. The drop in

the potato ration in July 1943 probably served to bring the ration level into balance with available supplies, since previously it was estimated that 25 percent of the official ration was not actually distributed.

Reported German requisitions from the Netherlands in 1943 were below the 1942 level. In contrast with reported exports of 325,000 MT of potatoes in 1942, information to date reveals only 84,000 MT exported to Belgium. The only butter exports reported was 9,500 MT in March as compared with 20,000 MT in 1942. However, vegetable exports probably increased from an estimated 333,000 MT in 1942 to between 350,000 to 400,000 MT in 1943. Also 90,000 milch cows were shipped to Spain to repay German indebtedness. Meat shipments were probably reduced, however, to perhaps 30,000 to 35,000 MT. 1942 cheese exports of 30,000 MT were probably maintained.

D. Norway

It is estimated that the current Norwegian urban diet provides the average city-dweller with a daily diet of 1815 calories, 50 grams of protien, 45 grams of fats, and 300 grams of carbohydrates. This represents an increase of 70 calories per day over the average intake during the crop year 1942-43. While such a dietary level is still below minimum standards, it does signify an improving situation which is justified by the supply position of the country. Protein intake alone is declining, and this could be

rectified if increased guantities of the fish catch were left to the native population.

Complete data are not yet available on Norwegian fish exports to Germany in 1943, but they should total between 300,000 and 350,000 MT. In addition 4,000 MT of fish oil were requisitioned, and exports of fruit and cheese probably totalled 3,000 MT each. In addition quantities requisitioned presumably for the use of German soldiers and officials in Norway were reported at 8,000 MT of meat, 150,000 MT of potatoes, and 2,000 MT of eggs.

Early in the year, Quisling announced that the Germans had promised Norway in 1943, 50,000 MT of sugar, 16,000 MT of fats, and 180,000 MT of Grain. Shipments actually reported were less than 6,000 MT of fats and less than 40,000 MT of sugar, while grain shipments were probably between 125,000 and 140,000 MT. Sweden sent 1,000 MT of the fats in addition to some 9,000 MT of vegetables.

Although Norway probably would be unable to consume all her fish catch, her fish intake could have been increased above present levels, and considerable quantities of fish oil for manufacture into sorely needed margarine could have been obtained from the remainder.

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Inside 1

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German Air Power

April — 1943

"GERMAN AIR POWER"

A FILM REPORT

Prepared for the

BOMBARDMENT ADVISORY COMMITTEE

By the

OFFICE OF STRATEGIC SERVICES

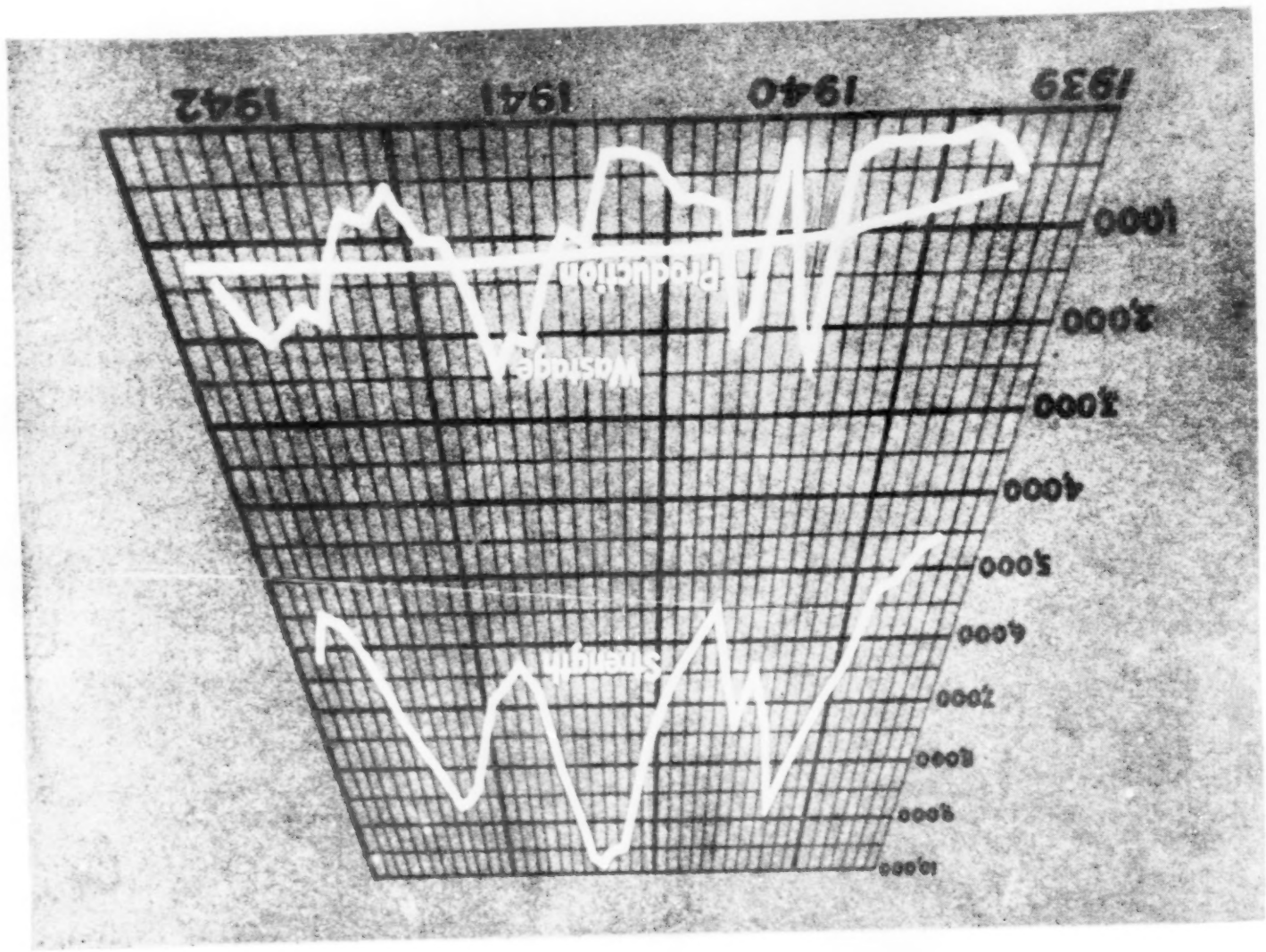
This brochure, based on the material used in the film report, demonstrates the methods used in arriving at the following facts concerning German Air Power:

1- **Production from September 1939 to October 1942 totaled 44,235 planes; but wastage through battle and operational losses, flying accidents, repair pools and allocation to training totaled 43,260 planes for the same period. At present, the German Air Force loses each month 1,300 planes, approximately as many as it produces.**

2- **The front line strength in October 1942 was 4,200 planes, (100 less than the front line strength in September 1939). This is the equivalent of only three months' production.**

3- **The German Air Force has already reduced its operations in order to keep its losses lower than its rate of production, but this is being offset by the continual bombing of German aircraft factories.**

4- **Ever increasing bombing of these aircraft factories would soon compel the German Air Force to curtail its operations even more drastically.**


1939
1940
1941
1942
1000
2,000
3,000
4000
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6,000
7,000
8,000
9,000
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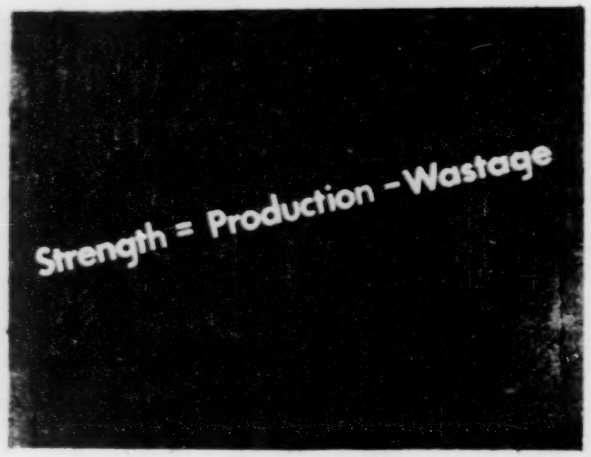
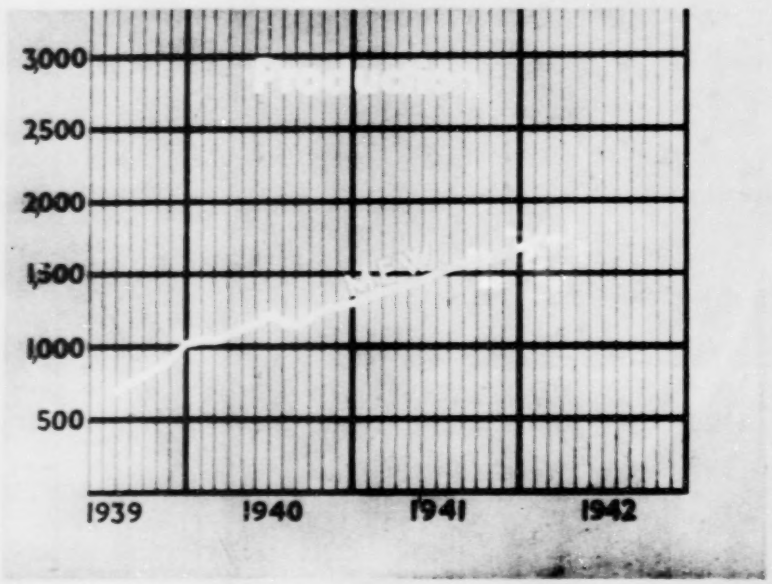
Production
Wastage
Strength

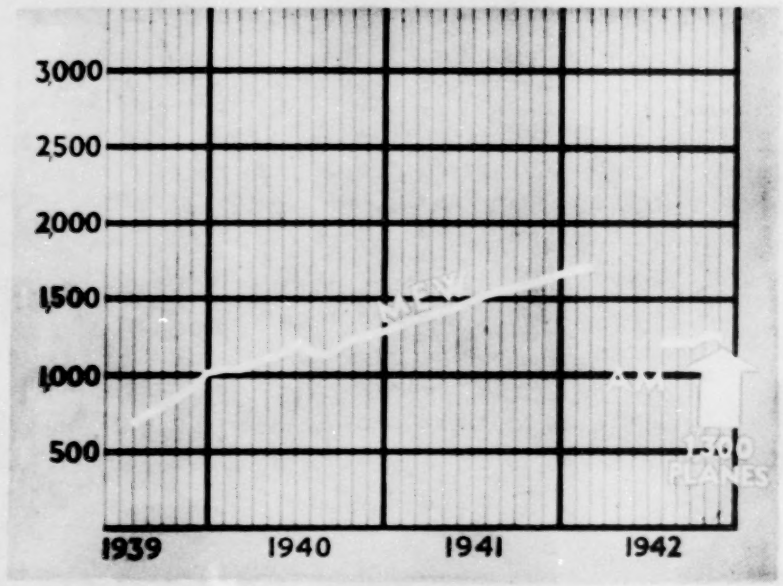


Computing PRODUCTION

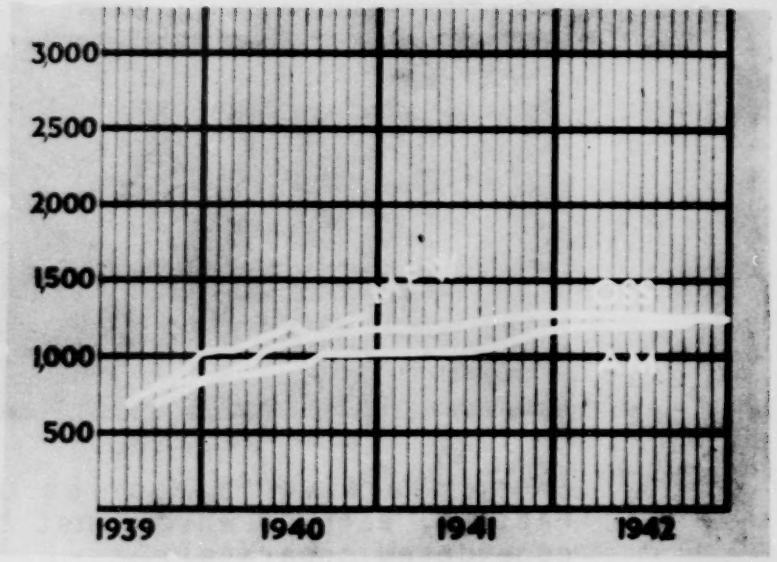
- The formula for determining German Air Strength is simple -- it is the difference between Production and Wastage. But supplying the figures for Production and Wastage is a major assignment of the British and American Intelligence Services.



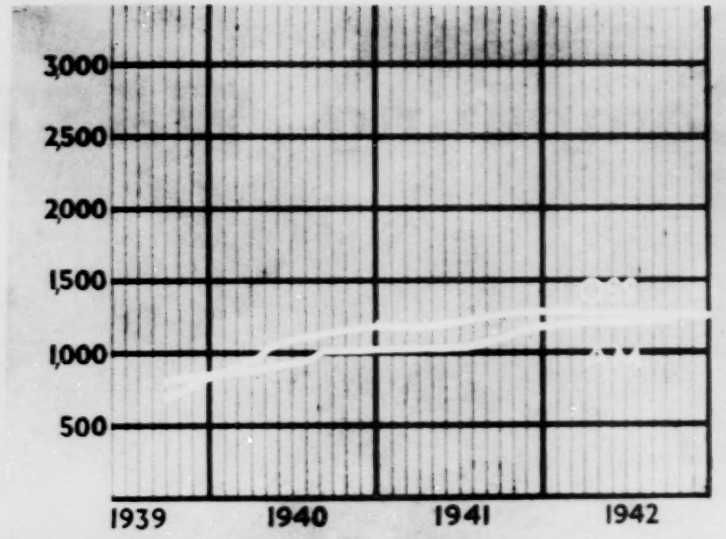
1- Until recently the accepted estimate of German aircraft production was that made by the British Ministry of Economic Warfare, in cooperation with the Air Ministry. Based on pre-war knowledge of the airplane industry -- factory floor space, number of men employed, etc., -- it shows an estimate of monthly production for the early part of 1942 of about 1,700 planes a month.



2- In the Spring of 1942, the Air Ministry found a new key to German production. Extremely secret, this estimate places the monthly production for the Fall of 1942 at 1,300 planes, a figure accepted by intelligence agencies in Britain and the United States, and also by the MEW. However, the AM figures for the period preceeding the Fall of 1942 were based on incomplete information, so

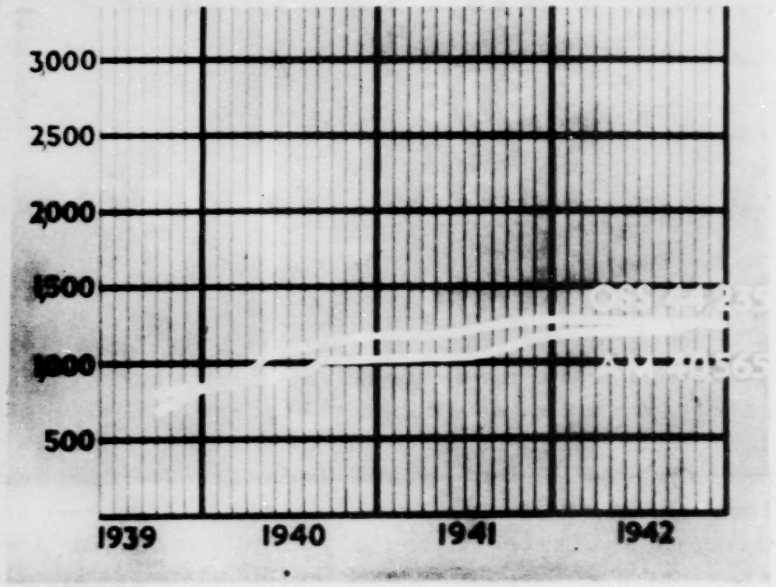


3- A third curve, based on all available information, has been worked out. It will be seen that for the early period, this OSS curve is consistent with the MEW figures which are based on pre-war data and therefore are fairly accurate for 1939 and early 1940.



4- The OSS curve levels off after the Summer of 1941, just after the beginning of the Russian campaign, whereas the AM curve shows a production rise of 20% after the Summer of 1941. This rise in production is not probable for the period when manpower was drained for the huge army needed on the Eastern front.

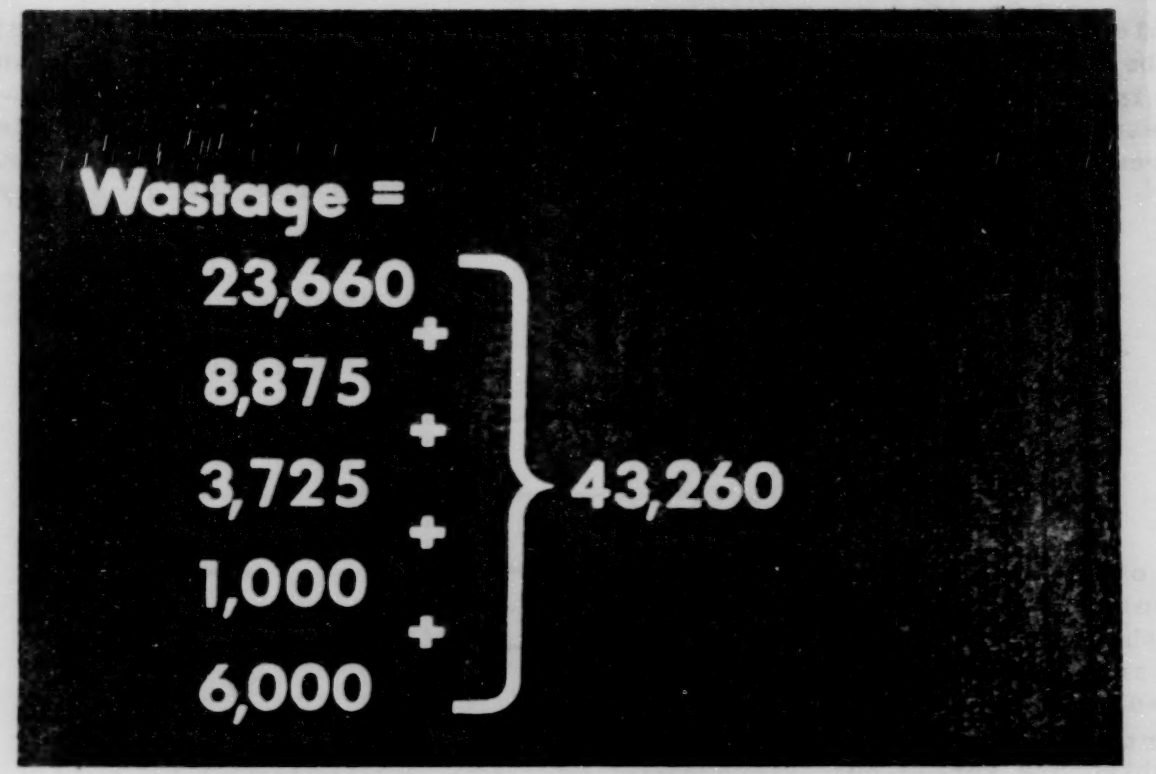
5- The accumulated totals of the two production estimates from September 1939 through October 1942, shown on the chart to the right, indicate a difference of nearly 4,000 planes. The estimate to be accepted will be the one which will be more consistent with the figures for Wastage and Production which are worked out on the following pages.



Computing WASTAGE

Wastage =
Battle Losses
+
Operational Losses
+
Flying Accidents
+
Factory Repair Pool
+
Planes Allocated to Training

There are five categories of Wastage, each of which must be considered separately.



1. BATTLE LOSSES

On the Western front, pilots' claims are generally used to compute the number of enemy planes lost in combat. On the Eastern front, a different method is used to compute the number of planes lost. Both the German and Russian communiques greatly exaggerate the losses they inflicted and minimize the losses they suffered. It is unlikely that the Russians would admit losing more planes than they know the Germans

have lost. A figure close to the Russian admissions of their own losses can be taken as a figure for the German battle losses. The total computed in this manner for the period from Sepetmber 1939 through October 1942 is 23,360.

2. OPERATIONAL LOSSES

consist of planes destroyed incidental to first-line operations; take-off, landing, and bad weather accidents, etc. These losses range from 30 to 65% of the battle losses. Total figure, 8,875.

3. FLYING ACCIDENTS

completely unrelated to combat flights represents a waste of 2% of the first line strength. Total figure 3,725.

4. FACTORY REPAIR POOL

In October 1942, the number of planes estimated to be in the factory repair pool was 1,000.

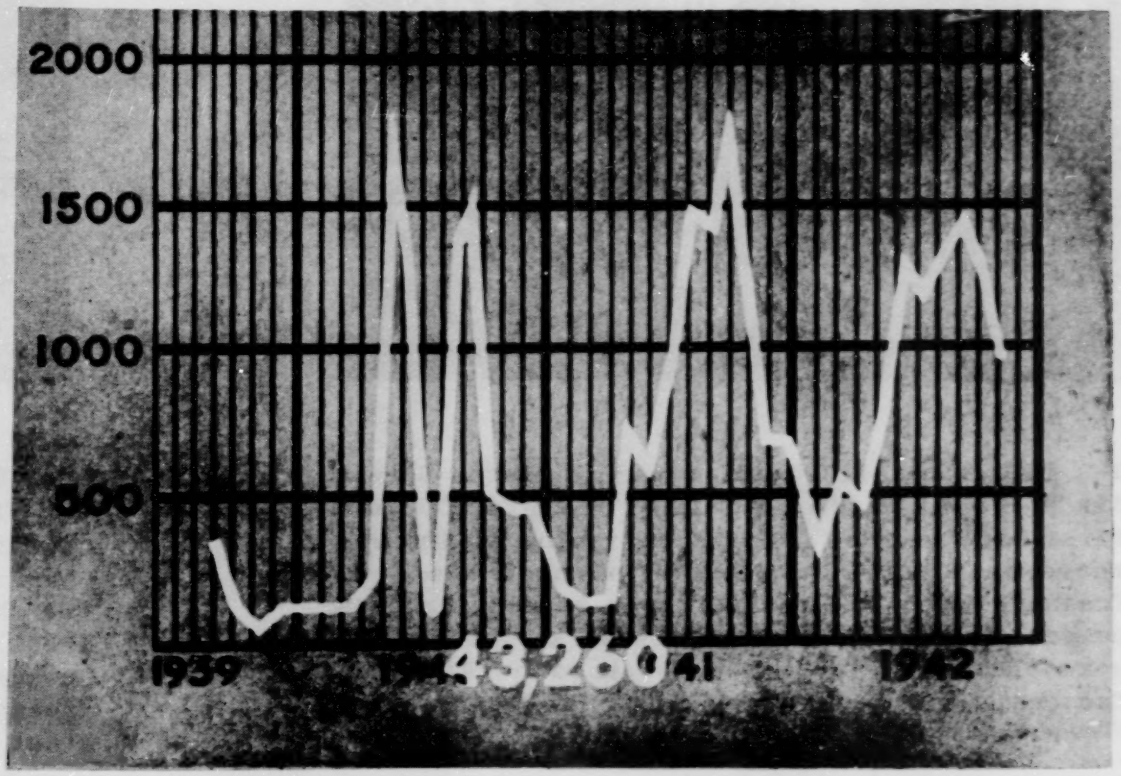
5. ALLOCATIONS TO TRAINING

The destruction, damage and wearing out of planes used for training purposes is estimated at 8% per month of combat planes used. Total 6,000.

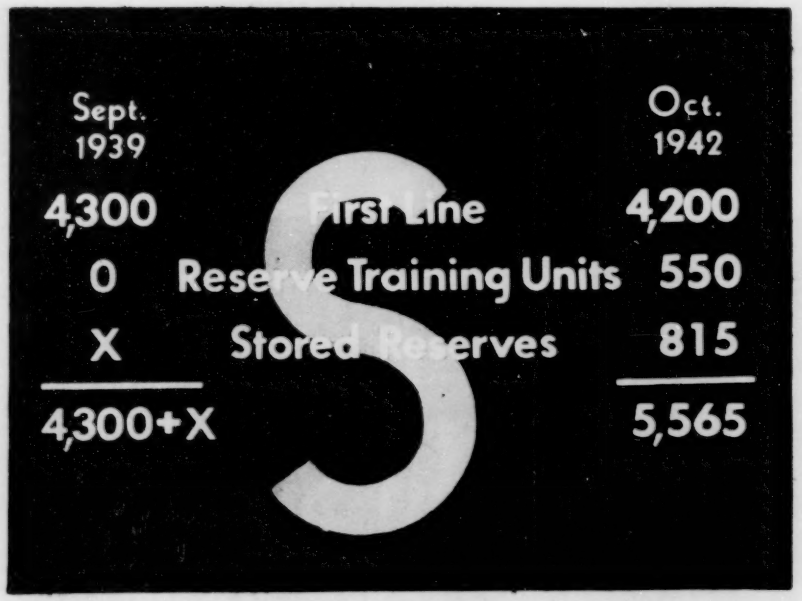
TOTAL WASTAGE FOR ALL CATEGORIES: 43,260.

When plotted on a month by month basis, the Wastage curve reveals theperiods of intense fighting.

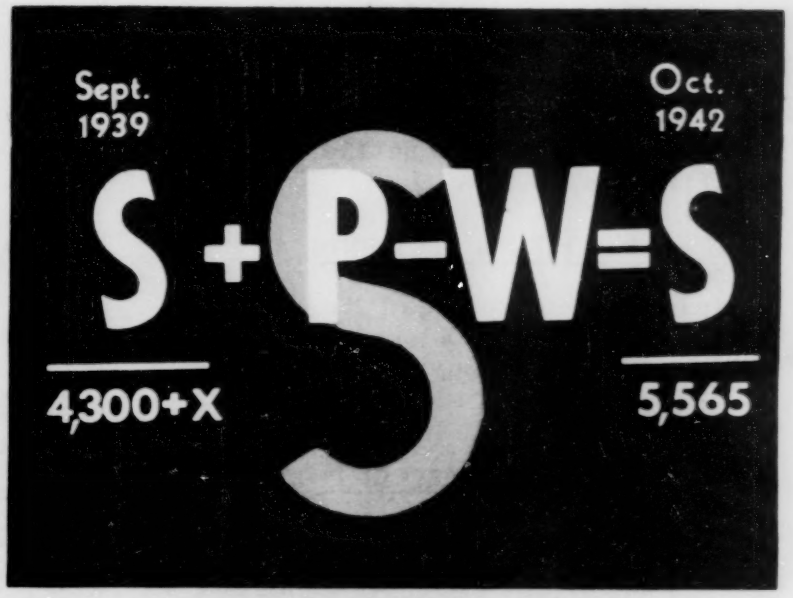
September 1939: Poland.
Spring 1940: Norway, Lowlands, France.
Fall 1940: Battle of Britain.
Spring 1941 and 1942: Russian Campaigns.



Computing STRENGTH.... and checking

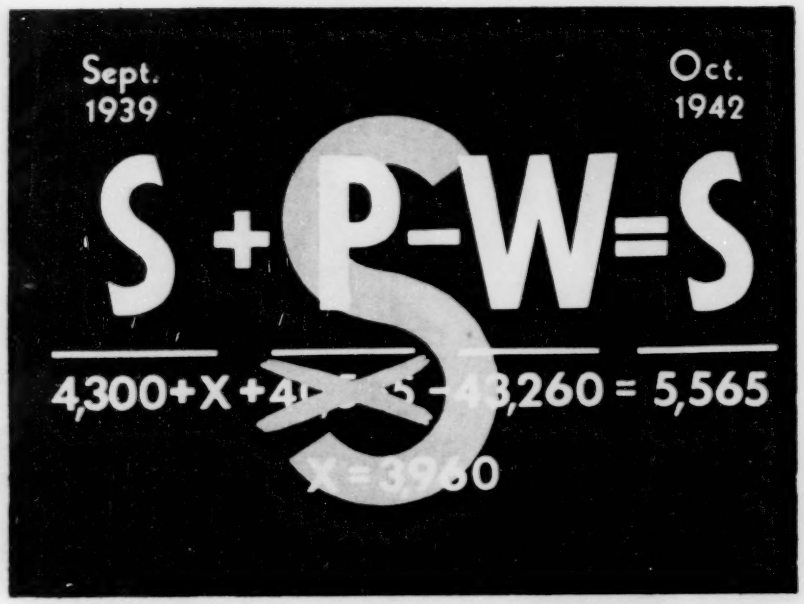


1- In October 1942, total Strength of the German Air Force was 5,565 planes, of which 4,200 were first-line planes. At the beginning of the war there were 4,300 first-line planes. Reserve Training Units had not yet been formed, and the number of Stored Reserves was not known. In the next chart we form an equation with the known factors: S for Strength, P for Production, and W for Wastage.

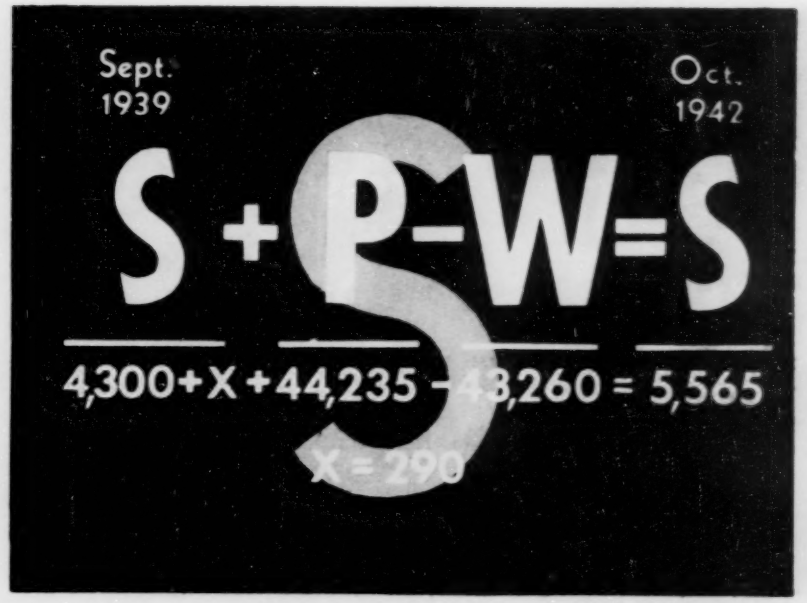


2- Strength for October 1942, equals Strength at the beginning of the war, plus Production during the war, minus Wastage. We have two figures for Production, so we proceed to solve for X (the number of Stored Reserves in September 1939) with each of these figures. From the two resulting figures for Stored Reserves, the more reasonable one will be the key to the more correct figure for Production.

the two estimates for production . . . .

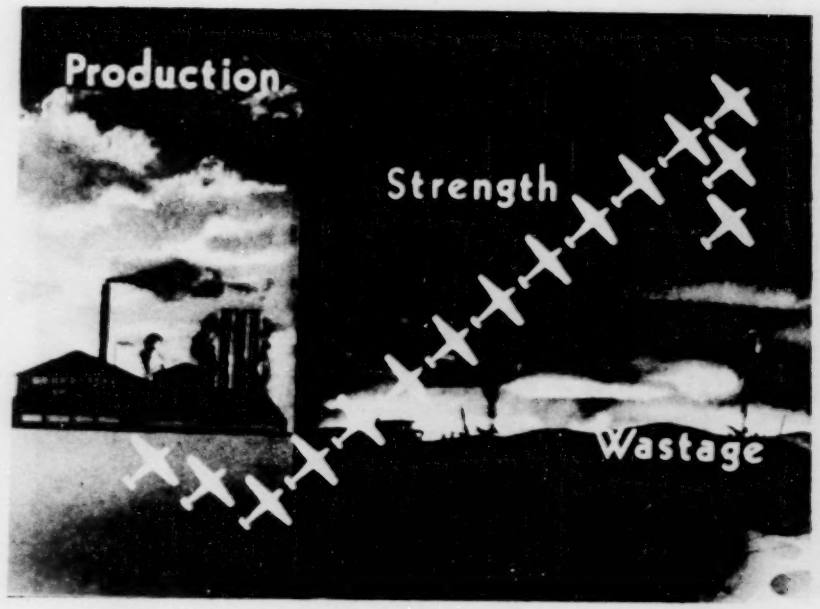


3- In this solution, we insert the known figure for Wastage (43,260); and the Air Ministry figure for Production (40,565) as shown on page 3. Solving for X, we get the figure of 3,960 as the number of Stored Reserves in September 1939. This is much too high when we consider that the Germans were using some obsolete planes at that time, which they would hardly do if they had almost 4,000 planes in reserve.

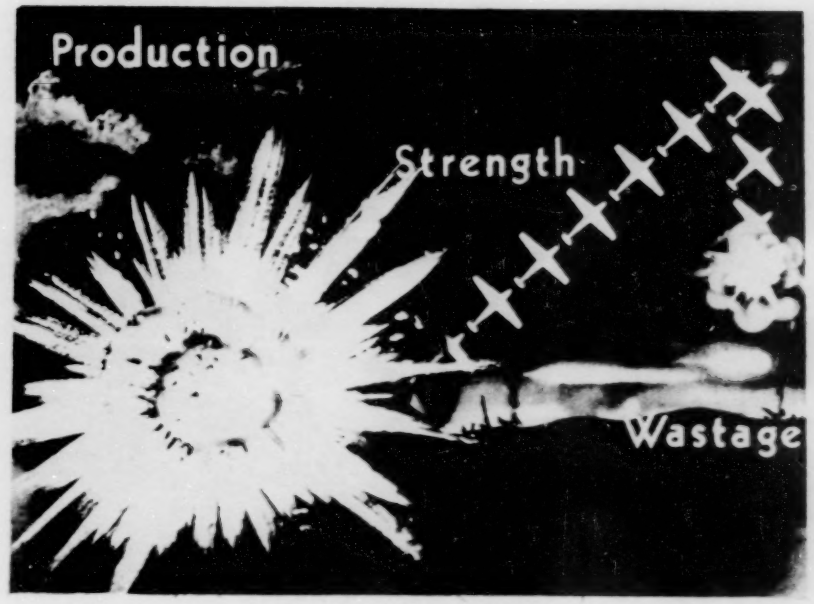


4- In the above chart we substitute in place of the AM figure for total production, the OSS figure of 44,235. Now X, the number of Stored Reserves in September 1939, equals 290. This figure is much more consistent with the usual accepted figures for Stored Reserves. Therefore, of the two estimates for total production shown on page 3, the OSS figure of 44,235 is the one we accept in this report.

Continual Bombing of Aircraft Factories



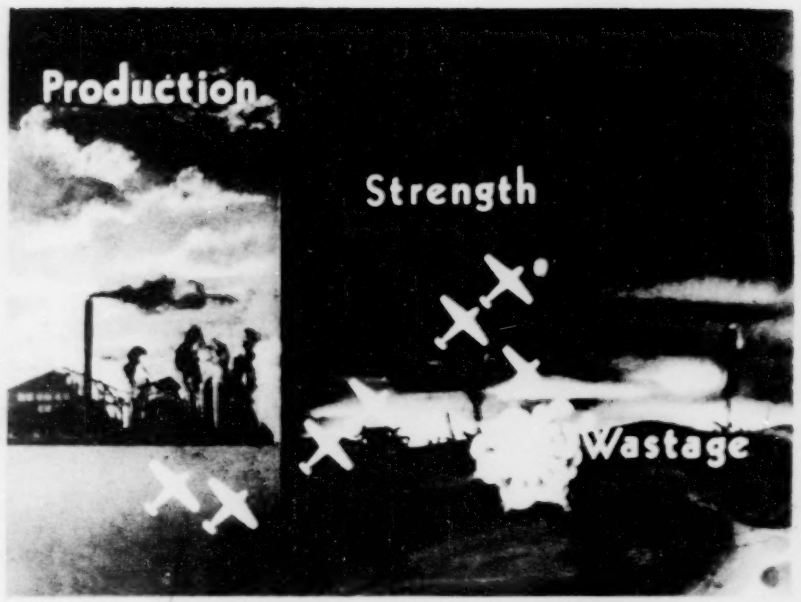
1- At present German Air Strength is equal approximately to only 3 months' production. The flow of planes from factories to fighting is not increasing the total Strength, it merely replaces Wastage. Any disruption of Production would have immediate and serious effects.



2- Bombings of German aircraft factories mean fewer planes produced. If the Germans maintained their present scale of operations, the Wastage rate of 1,300 planes a month would drain the decreasing Strength, and the position of the German Air Force would soon be critical.

. . . . and Compel Drastic Reductions of

Would Cripple German Air Strength



3- To bomb aircraft factories is to strike at the weak link. With continual bombing of their aircraft factories, the Germans will have to reduce operations in order to keep its losses lower than its rate of production. And reduced operations would weaken the entire German strategy.

There are indications that the German Staff has already changed its air strategy. Fewer bombers have been sent over Britain, German fighters have refused to rise to Allied sweeps, and twin-engined bombers are being converted into combat types for defense.

Whatever the German air strategy is, their problem is grave

●

Its Air Force Operations